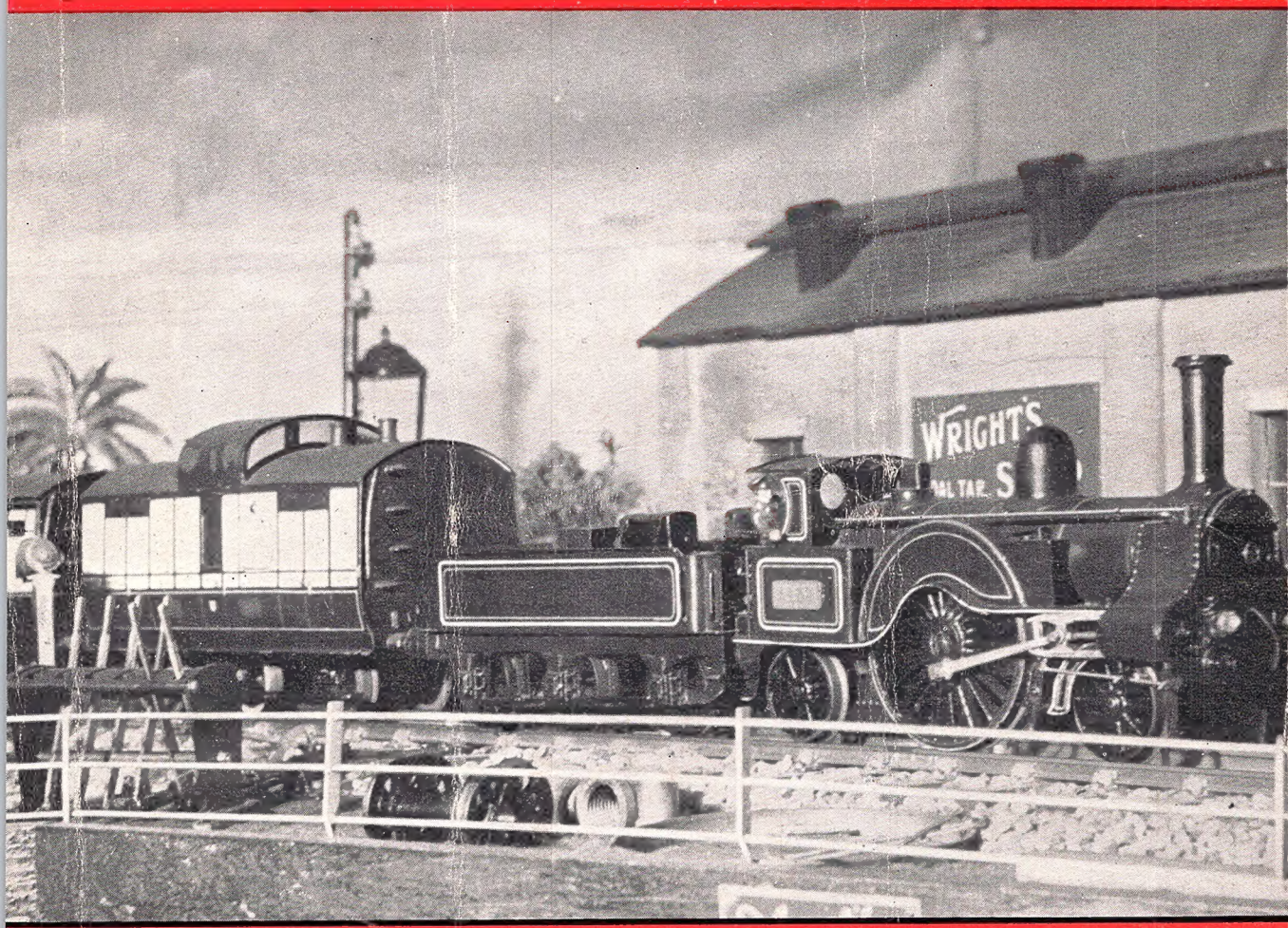
RAILWAY MODELLER

SEPTEMBER 1955



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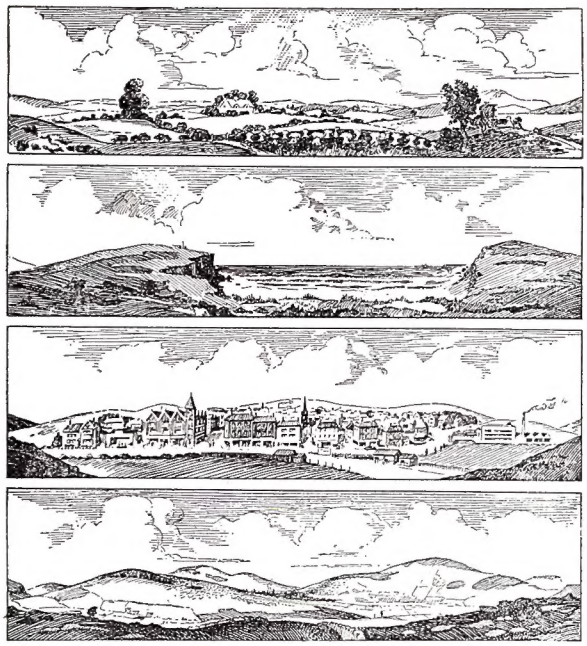

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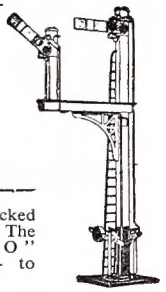

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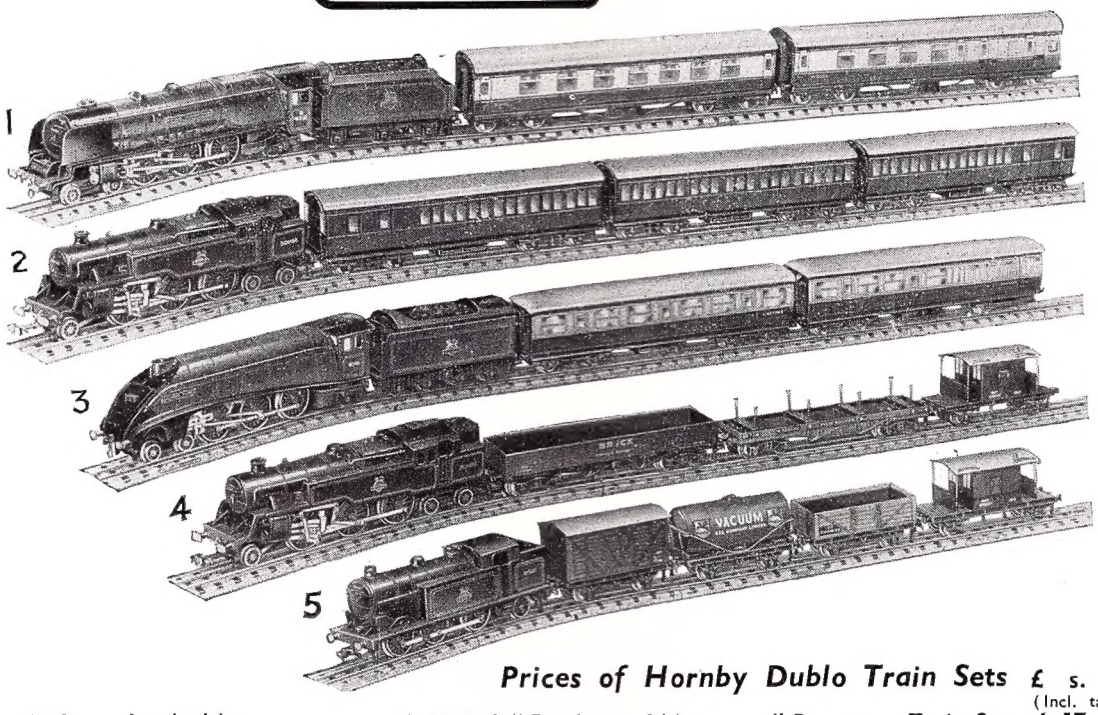

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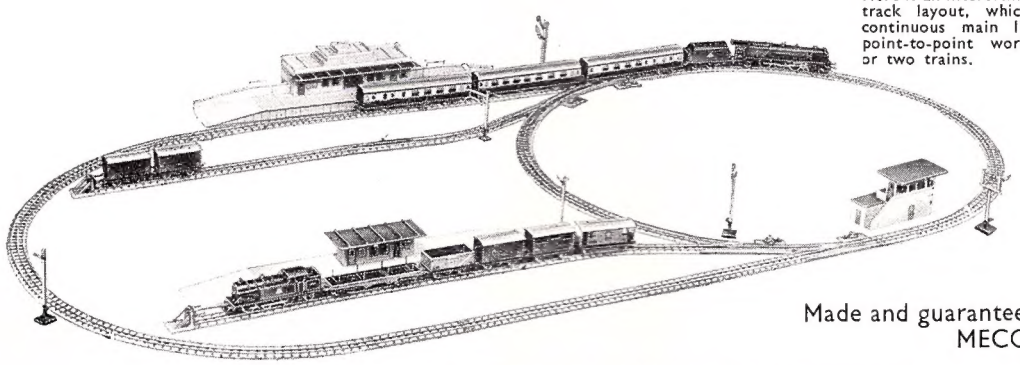

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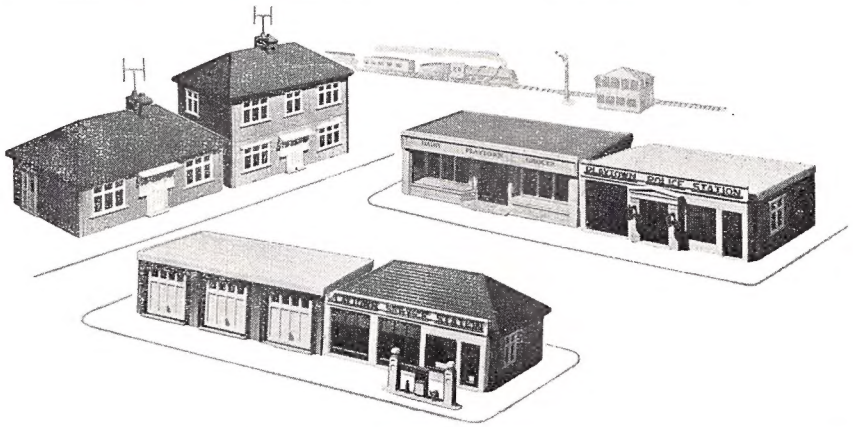

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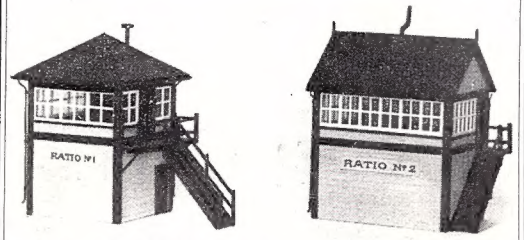

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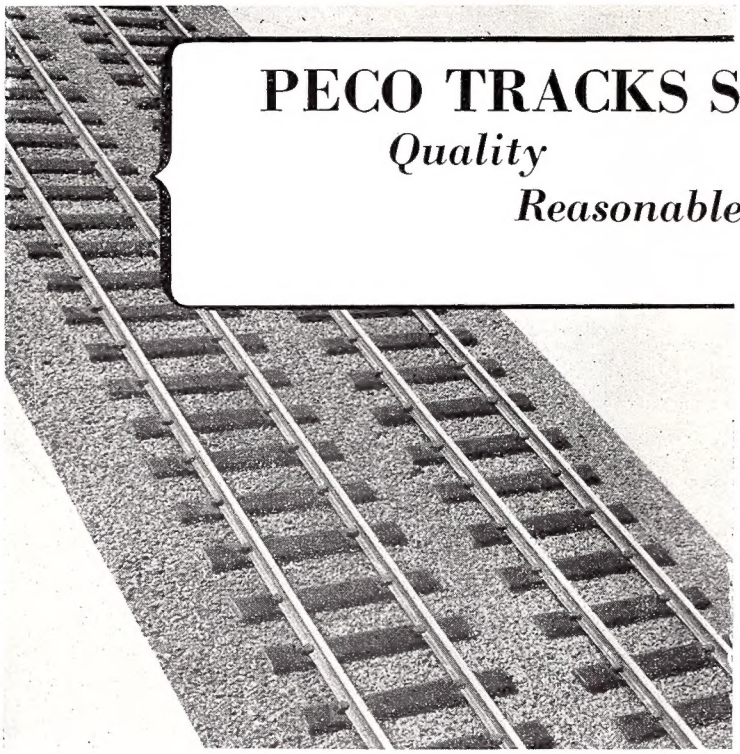

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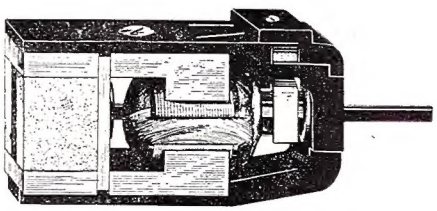

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VOL. 6. No. 59. SEPTEMBER 1955

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BACK NUMBERS

Back numbers of most issues of the Railway Modeller from November 1951 are available, price 1/6 each plus postage (2d. first copy, ½d. each additional copy). We regret that certain issues are now out of print, while stocks of many others are low.

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NEXT MONTH

In addition to our preview of the Model Railway Hobby Show, we shall include articles by P. D. Hancock and N. S. Eagles.

THE LOBBY

THE modelling season has now restarted in earnest, and next month will include three major events. Perhaps the most important of these will be the Model Railway Hobby Show, an entirely new exhibition sponsored by the trade as a shop window for all the good things in store for the winter season. Further details will be given next month, but on page 214 you will find a preliminary announcement concerning this interesting exhibition.

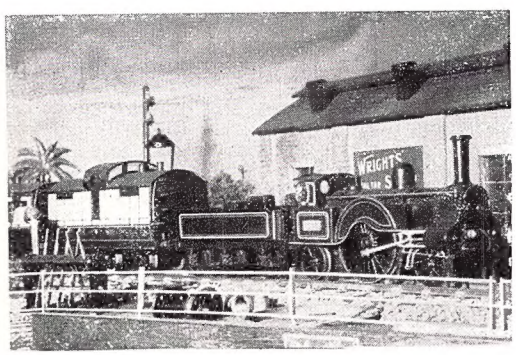
In Brighton the British Region of the N.M.R.A. will be holding their annual convention on the weekend of October 1 and 2. The event this year has been organized by Bob Bradshaw, the popular managing director of Bradshaw Model Products, who has been a member of the Region for many years and an active supporter during that time. As readers will probably know, the British Region of the N.M.R.A. caters especially for modellers who favour transatlantic prototypes.

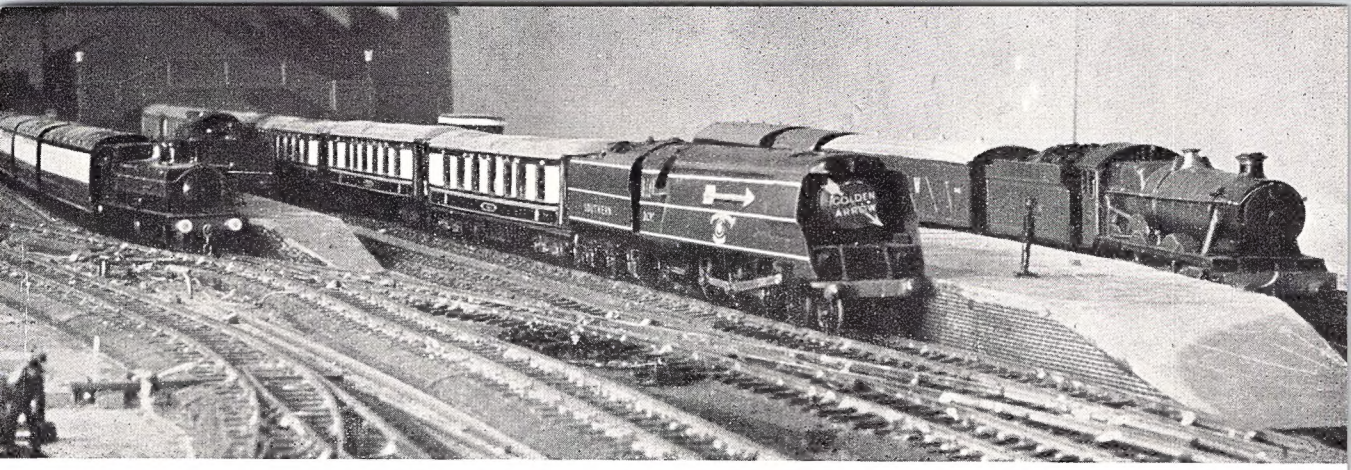
Also on Sunday, October 2, the British clubs will be holding the fifth Birmingham conference. These meetings began when the London and Manchester clubs decided that a closer association between them was desirable, not merely for the practical benefits, but in order that they might get to know one another better. Accordingly Birmingham was chosen as a venue as being reasonably easy of access from both cities. However, it was soon decided that this was too much of a good thing to keep exclusively to the two clubs, and so an open invitation has been extended to all established clubs to attend this meeting. We do earnestly hope that all societies will send at least one delegate to this very important conference.

COVER PICTURE

This realistic scene on Alan Shackleton's "Museum" layout shows his L.N.W. "Problem" on the head of a train of typical six-wheelers.

Photo : Alan Shackleton.





Railway of the Month

NORTH DEVONSHIRE DEVELOPMENTS

by K. Northwood

THE North Devonshire has progressed in certain directions, and additions have been made to the rolling stock since the last account was published in 1953. These notes are submitted with the hope that the lessons learnt in the process can be passed on to other railway modellers, and if they prove of interest and assistance then we shall all be a little happier in this great hobby of ours.

Power supply. A change has been completed here, as the original split potential supply has been replaced by cab control on individual supply. The reasons for making this change are as follows:

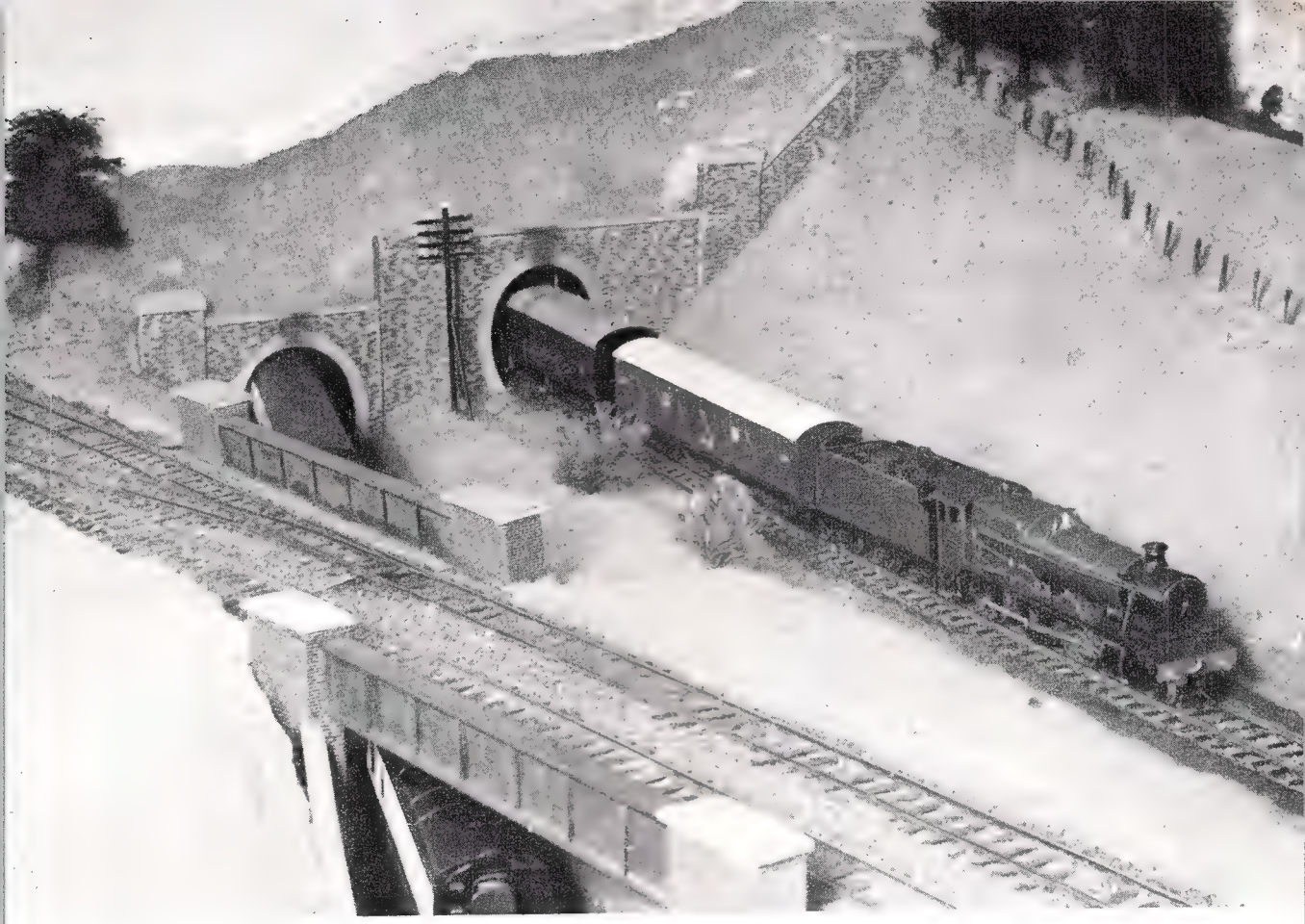
(1) With only one split-potential power pack it was found that when two trains were running the adjustment of one controller not only altered the speed of the loco intended, but also affected the running of the other—especially if both were going in the same direction.

(2) It was essential, without cab control, to bring trains from one controller to the other when they passed from certain sections of track to other sections. For example, the old method had all the up lines and sidings on controller "A" and the down lines and sidings on controller "B." When a train crossed over from the down to the up line or vice versa the two controllers had to be *exactly* matched before the train reached the crossover, otherwise the loco either stalled or shot ahead unrealistically. I could never master this art and it caused a great deal of dissatisfaction. Also, by virtue of the two controllers being required for the one train making this movement, the rest of the locos must be at a standstill. With cab control any movement can be carried out without interference with other locos, wherever else they may be *except* on the section particularly concerned. Apart from the quantity of rolling stock the number of trains which can be in motion at one time with cab control is limited only by (a) the number of cabs provided, (b) the number of sections provided in the layout, (c) the number of trains one operator can control at once (in my own experience two trains per operator is a feasible limit), and (d) the number of operators.

(3) The split-potential system was originally adopted by the N.D.R. because it was mistakenly thought that single-knob control of speed and reversing was possible only by this method. This assumption was entirely wrong, as many commercial controllers, such as the Stenphone C7, are readily able to do without the reversing switch on single or individual supply. Rotation of the knob in either direction from the centre off position changes the polarity of the current to the rails and therefore the direction of running of trains.

While converting to cab control the North Devonshire also used half-wave rectification, or "pulse power," for its power supply to the controllers, in such a way that trains can be started on half-wave and gradually accelerated by introducing full-wave rectification for normal running. This was done simply and cheaply, the only *extra* additional materials required being some wire and one government surplus 50-ohm rheostat (price 3/-) for each cab. Such is the control of slow running with pulse power that flywheels, etc., are now regarded as unnecessary refinements for my locos.

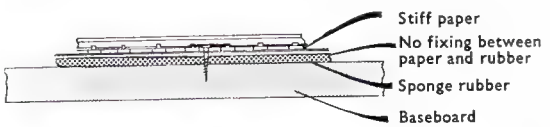
For anyone who contemplates using pulse power it should be pointed out that motors tend to run hotter and noisier with this method of supply, and it is far better to confine it to slow running, starting and stopping—hence the provision of the second rheostat on each cab for the North Devonshire. The trains are started with this extra rheostat in the off position (giving half-wave supply), and when they are just on the move it is slowly turned to the full on position (giving full-wave rectification) and the main controller is then used for control throughout the journey of the train until the next stop. It is possible to run trains on pulse power at a scale walking pace. Up to date two cabs are finished in this manner for the layout and a third is nearing completion. I must



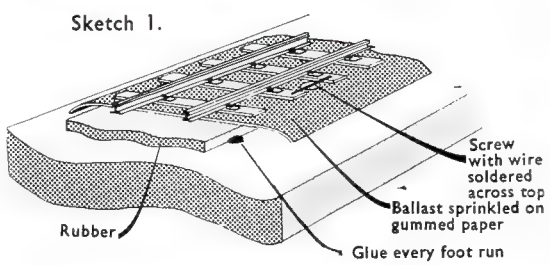
Above : Eaton Mascot Hall emerges from tunnel hauling a passenger train.
Facing page : Scene at west end of Torreyford station ; rebuilt GF Merchant Navy on Pullman train about to depart.

hasten to add that no two makes of mechanism behave the same on pulse power; some are more improved than others.

Trackwork. After a visit to Mr. Fleetwood Shaw's in April 1953, I was so impressed with his results on track laid on sponge rubber that I could not rest until trials had been made on my own layout with similar trackwork. The experiments confirmed Mr. Shaw's contention that his method reduces maintenance and derailments, at the same time giving quieter running.



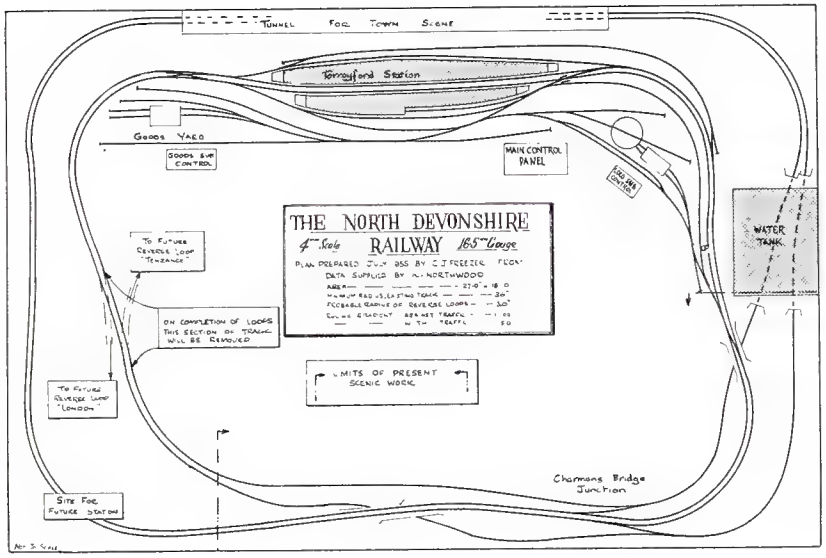
Sketch 1.



My sincere thanks are due to him for his original advice on the subject.

Up to date the whole of the North Devonshire outer double line circuit has been relaid on sponge rubber and soldered into one solid circuit 27ft. x 17ft. without expansion joints. As the track is not rigidly held to the baseboard, but just laid on top of the sponge rubber, it is free to expand and contract as a whole unit. The only trouble yet experienced over ten months is a lifting of parts of the track and this has been countered by putting a screw here and there between the sleepers where required. A half-inch length of wire, which extended over the sleeper on each side, was soldered on top of each screw (sketch 1). This wire was of such a height that the track could rise only $\frac{1}{32}$in. above the rubber but could be depressed on the passage of trains. This latter "floating" effect is important, as it does away with any necessity for springing loco or other rolling stock wheels. Ballast effect was obtained by gluing stiff paper on the underside of the sleepers and scattering ballast on this while still wet. The paper was *not* glued to the sponge rubber beneath it.

After the whole circuit was underlaid with sponge rubber $\frac{1}{4}$in. thick, the noise level of trains was considerably reduced, and when the running surface of the rails was notched with a file as near to every scale sixty feet as possible the "clicks" of the wheels were very much more realistic. Actually if each



THE NORTH DEVONSHIRE
4mm Scale RAILWAY 16.5mm Gauge

Left: Plan of North Devonshire line.

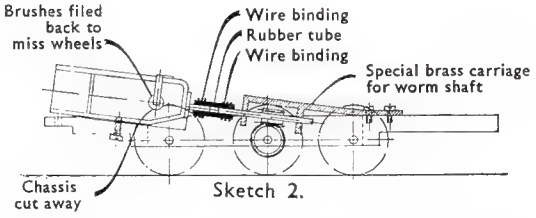
Facing page: Prairie tank on freight train consisting of repainted Gaiety brake van, P.O. wagon, Nucro tank wagon, Rex cattle truck body on S. & B. sprung axle-boxes, Nucro well wagon, etc.

eighteen-inch length of rail is notched halfway it works out at about every fifty-seven scale feet, which is near enough correct to sound right. Increased noise effects over girder bridges or points can be obtained by substituting wood in place of the rubber for the distance required and fastening the track down to it so that it acts as a sounding board.

Rolling stock. The number of goods vehicles has been gradually increased, the most satisfactory additions being the Nucro bogie G.W. well wagon and the Nucro bogie tank wagon, which were both built up from kits; not only are these fun to assemble, but they also run and look well when finished. The Gaiety brake vans also are excellent models of the twenty-ton G.W. vans, but the plastic bodies have to be painted the correct shade of dark grey and the handrails picked out in white paint to show the details at their best. On the N.D. models shown, the lettering, except for the G.W. transfers, was done with white paint and an ordinary pen.

Passenger stock additions include a siphon G which was built and presented to the North Devonshire by Flight-Lieutenant Richardson of the R.A.F. while he was stationed near the line and a L.M.S. parcels van. The latter, with a L.M.S. horse box, was made by a a fellow member of the Edinburgh and Lothians Miniature Railway Club, Mr. D. Rowland.

Locomotive stock has increased and now consists of one each King, Castle, Hall, large 2-6-2T; 57XX pannier tank and a South Wales rebuilt type 0-6-0T for G.W. trains, but there is also a Southern Bulleid Pacific, of which more anon. Of these, the Hall deserves special mention, as it was home-built with the aid of Sayer Chaplin engraved flat brass sheets for the cab, footplate, buffer beams, smokebox, splashers and tender body. This model gained a diploma at the 1953 Model Engineering Exhibition and had an American Pitman DC71 motor in the tender at that time. This drove the driving wheels through a shortened version of the double universal used by Graham Farish but situated *below* the footplate. This motor gave excellent results, but it was impossible to get enough lead in the loco to do justice to its power and it has therefore been changed.



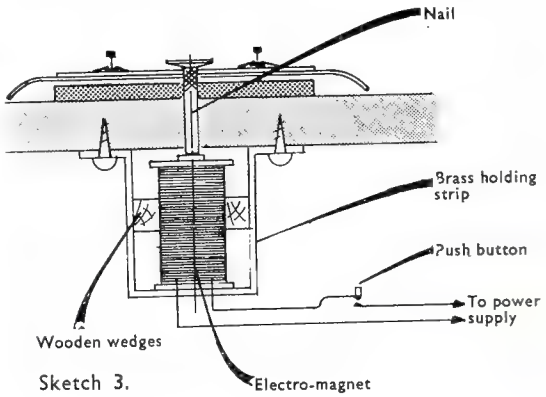
Sketch 2.

"Eaton Mascot Hall" now has a Zenith 004 motor in the tender and the D.C.71 has been transferred to the Merchant Navy Pacific. The performance of this excellent Zenith motor is so good that it is sad to realize it is no longer manufactured. The Southern loco is a Graham Farish and was obtained cheaply at a disposal sale. The original tender motor was removed entirely and the Pitman D.C.71 put on the loco chassis instead. The gears were removed and a K's 40:1 nylon wheel and worm were substituted as per sketch. A bit of filing was necessary on the backplate in the cab and on the chassis to get the motor in. The "pick-up" was left as the makers designed it, i.e. through the tender wheels and two plunger shoes attached to the tender frames. A lead weight was put in the tender in place of the old motor. The power was brought to the motor through flexible wires of sufficient length to allow the chassis to be removed from the body of the loco and the wires to drag through the cab. I have found this type of G.F. pick-up to be infallible and by far the most reliable I have tried. The shoes are not very noticeable if they are painted black (except of course on the rubbing surfaces), and are certainly not so susceptible to troubles due to dirty track—in fact their rubbing action tends to clean the rail. The tender was coupled closer to the loco to eliminate the unsightly gap and the cover for the old propeller shaft was removed from the front of the tender body. Perhaps readers will wonder why all the trouble was taken to re-motor this loco and not super-detail it. The answer is simply that as a model of the Merchant Navy class the loco was not bad and satisfied me inasmuch as it justified run-

ning an all-Pullman train called the " Devon Arrow " on the North Devonshire. Name-plates will be manufactured for this train when time permits.

The original two-pole motor was a good puller but a bad starter, a " jack rabbit " according to our standards, besides being noisy through the gears. As rebuilt the loco is quiet up to about fifty scale miles per hour, when a motor hum becomes audible, but (note this) it will glide away with thirty bogie coaches with ease on ten volts and has actually handled ninety-two assorted wagons on ten volts at a quarter of an amp! This includes long stretches of one in 100 gradient, and the limit of loading is only the slipping of the drivers. It is not possible to stall this DC71 motor in spite of lead in the loco and Graham Farish rubber tyres on the middle drivers, which certainly give greater rail grips. A model of this type of loco is one of the few British prototypes in which this motor can be fitted in the body owing to the size of the streamlined casting and the cab.

The success of this decided me to purchase one of the first Formo motors, which is very similar to the smaller Pitman DC60. I have now fitted this in the tender of 7013 " Bristol Castle " and used Jennings universal couplings to take the power to the driving wheels. Again K's nylon 40:1 gears were used and the performance of the loco is much improved. At high speed the universals (which run at the same speed as the armature of the motor) give a little noise but not as much as expected. The power is such that driving-wheel slip is the load-limiting factor in spite of the extra space for lead weight being available in the loco due to removal of mechanism to the tender, and so a narrow strip of Sellotape was wrapped round the treads of the flangeless drivers as an experiment. This increased the adhesion and the loco makes light work of fourteen-coach trains when required. Its maximum speed is about 130 scale m.p.h., but as I prefer to run at correct scale speeds it is rarely let out to such an extent. Current consumption is approximately half an amp when running and three-quarters of an amp on starting. The mechanism is very satisfactory and has been well worth the trouble of installation.



Sketch 3.

Couplings. It has been decided to standardize the Nucro automatic type of coupling on all stock, both passenger and goods, as far as possible. Of course all vehicles *could* be fitted with auto-couplings, but as quite a lot of them are almost always together as trains, or parts of trains, it is unnecessary to change other than the end vehicles. For example, the four-coach suburban set has the original Exley couplings on all except the two outside ends for coupling to locos or other coaches. Most of the goods stock has three-link couplings fitted, but for future shunting operations a lot of these will be replaced by Nucro as funds and time allow.

For magnetically uncoupling the Nucro-fitted stock I prefer electro-magnets rather than permanent magnets between the tracks for two reasons: it is possible to create a bigger and wider field with electro-magnets, thus making the precise halting of the coupling directly over the magnet a little less critical, and the electro-magnet uncouples only when you press the button to energize it. Sometimes a permanent magnet uncouples the train unexpectedly. I am using with success some ex-government solenoids, for which I paid one shilling each, as uncoupler magnets. They work on either 12-volt D.C. or 15-volt A.C. very well

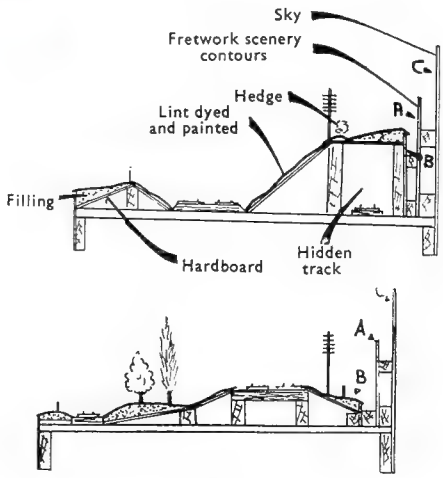
Eaton Mascot Hall on freight train.

and take about 0.3 amp. I have suspended them beneath the baseboard with the top of the core in contact with a shortened 2½in. nail pushed through a hole in the baseboard. All that is visible from above is the head of the nail suitably filed and trimmed between the rails at the position of the desired uncoupling.

Scenery. Only on a small portion of the layout has any attempt at scenery yet been made. About twenty feet of countryside has had embankments and background commenced. This section includes two tunnel mouths, embankments, two girder bridges, a signal box, a hedge and a fence, so there was plenty of variety for experience.

Having seen my friend P. D. Hancock's Craig and Mertonford scenery, I know what excellent scenic effects *can* be obtained in 4mm. scale, but I regret that, in spite of his helpful hints, my own layout will never be finished as well as his. However, such beautiful examples of fine workmanship (as the C. & M. certainly is) do set us, the common men, a target to aim at. Apart from lack of skill, another factor which will make the North Devonshire less detailed scenically is the larger area involved. To attempt fully detailed scenery in a room 27ft. x 18ft. would take up so much time that other developments would be at a standstill. Therefore a compromise had to be arrived at and an attempt was made to suggest Devonshire-type scenery without too much laborious detail. Bassett-Lowke background scenes were purchased and the sky was cut away from the landscape along the horizon line (or tree outline, whichever was the higher). The bottom half of the scene was then stuck to hardboard and the sky part was discarded. The hardboard was then cut to the outline of the scenery with a fretsaw and mounted as in the sketch.

The background (C) is a hardboard sheet painted sky colour directly or with a white paper front suitably coloured. The fretwork Bassett-Lowke scene (A) is mounted about one inch in front of it and a further piece of hardboard (B) about three-quarters of an inch still farther in front. The foreground scenery is made by laying suitably dyed lint on top of a base shaped according to the contours required. In my own case I used stiff fireclay on top of hardboard —this material can be easily moulded to any contour and left to dry. It becomes hard but cracks in the drying process, but as it is covered with the lint this is not a disadvantage. Of course, other materials can be used instead of fireclay, e.g. Alabastine, plaster of paris or papier maché. Even bundled-up newsprint would do in places, but I used the clay as I could obtain it cheaply and prolifically.



Sketch 4.

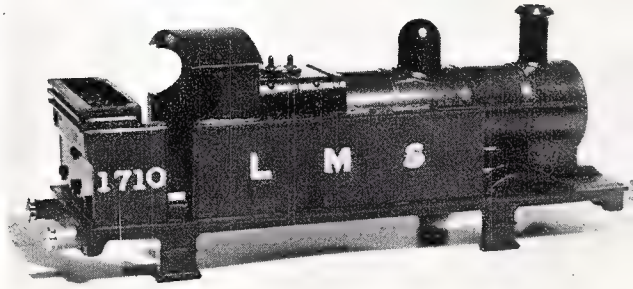
In making this foreground an attempt was made to take the line above the level of the top of the hardboard (B) and " round " it downwards at the back edge. The general idea of all this is to give a stereoscopic effect to the scene and it has succeeded to a fair extent.

Before finishing this account of progress on the North Devonshire Railway I wish to acknowledge my indebtedness to Messrs. Eric Evans and David Kelso, of the Edinburgh and Lothians Miniature Railway Club, for their efforts in providing the photographs.

7013 Bristol Castle passing Charman's Bridge junction at speed.

TWO SIMPLE CONVERSIONS

OF PROPRIETARY LOCO BODIES



by P. L. Gray

It is often possible to adapt a proprietary loco to resemble closely a prototype other than the one on which it is based. While such an adaptation is never strictly to scale, a pleasing result can be achieved.

"Jinty" to "Half Cab"

AFTER studying the Tri-ang 0-6-0T it was decided that the superstructure would convert without much difficulty into an ex-Midland 1F 0-6-0T Johnson "half cab" with the rebuilt Belpaire boiler; not a conversion to please the purist, perhaps, but such as to make a pretty fair representation. As several of these locomotives are still about, its use would not necessarily be confined to a period layout provided the B.R. totems were retained and the number shown in the drawing was prefixed by a figure four.

After removing the body from the chassis, start with removal of the rear portion of the cab. Using a fine tenon or coping saw, cut through the roof $\frac{7}{16}$in. from the front face, then carefully cut completely away from the bunker with a coping saw (or fretsaw, using metal cutting blade), doing any final cleaning up with a sharp, pointed hobby knife. Next cut away the bar separating the windows in the spectacle plate with the same knife, and remove any further plastic likely to obstruct the circular openings in the new spectacle plate.

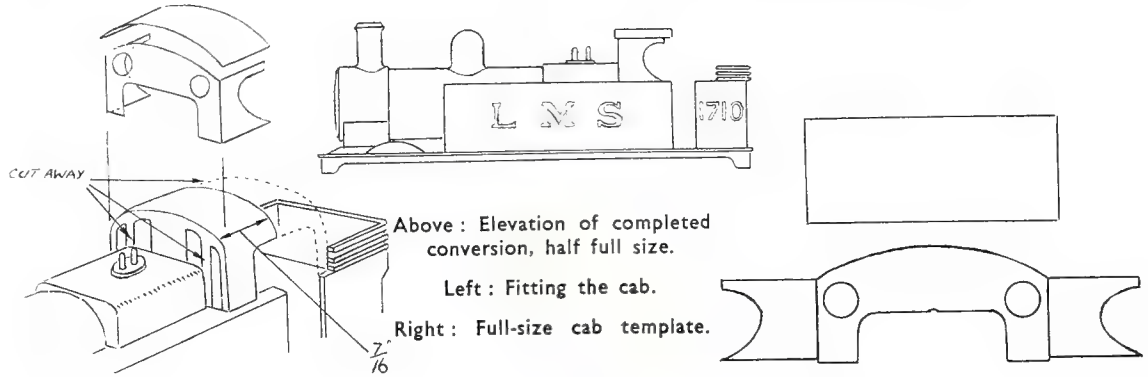
File the cab roof clear of the ventilator, etc., remnants and file down the beading on the side sheets, then make a series of criss-cross scratches all over the remaining cab to form a keying surface for the glue.

The new cab roof, spectacle plate and side sheets are made from Bristol board (alternatively 1mm. plywood or thin acetate sheet can be used), using the full-size templates given in the drawing. After they are cut out they are given a coat of shellac on both sides. Start the spectacle openings with a needle, open out further with a piece of 16 s.w.g. wire filed to a four-square point, spun back and forth between thumb and finger, and finally bring to the required diameter with a small, fine, rat-tailed file, also manipulated with a rotary motion. Do not worry about the resultant burr; give two further coats of shellac and when hard it can be cleanly and easily sliced off with a razor blade. A final touch with fine sandpaper finishes off this part of the job.

Next smear the remaining portion of the original cab with Durofix, then likewise the new spectacle-plate/side-sheet piece, and bring together, pressing firmly until the cement holds. Slightly curve the cab between finger and thumb before gluing into place, when it will be found to stick more readily.

Before finally fixing the new cab portion it would be advisable carefully to remove the smokebox number and shed code with a fine file.

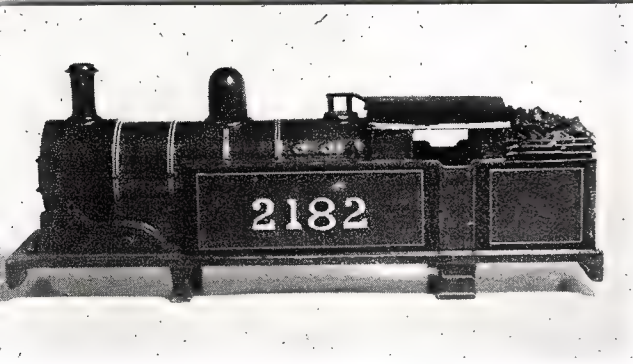
The newly applied cab should be given a further two coats of shellac and, when this is hard, finished with matt black paint, which can be gently rubbed with a soft cloth until a slight lustre, matching that of the original plastic, is obtained. After carefully removing the B.R. totems and numerals, transfers of L.M.S. pattern can be applied, as shown in the side-view drawing. The smokebox number and shed code (18D) can be added in off-white paint, or alternatively in dark grey (a couple of shades lighter than the black body colour), which gives an impression of relief. Finally the rear portion of the motor which protrudes into the cab can be rendered slightly less obvious by a coat of matt black paint.



Above: Elevation of completed conversion, half full size.

Left: Fitting the cab.

Right: Full-size cab template.



N2 to LTSR 0-6-2T

THE technique for conversion of an N2 casting to represent a London, Tilbury and Southend Railway 0-6-2T is the same as for "Jinty," and if the boiler fittings are bought instead of made it is probably easier. It is again pointed out, however, that this is only a representative conversion and makes no pretensions to complete fidelity.

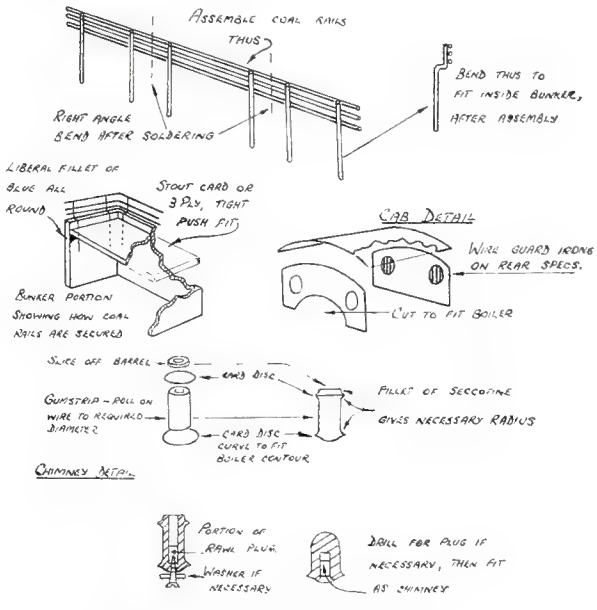
Clean the casting of all paint with thinners or paint stripper, then cut away the unnecessary portion of the bunker top with a "Junior" hacksaw and clean up with a file. Solder up the coal rails from brass or nickel silver wire (24 or 26 S.W.G.), leaving vertical joining stanchions a good length to fit well down into the bunker on assembly, after first bending to shape. Secure the coal rails in position by cutting a piece of thick cardboard or three-ply to a tight fit inside the bunker and pressing into place (see sketch), glue liberally underneath and disguise on top with coal or anthracite chips glued in place. To facilitate the foregoing, (a) soften vertical stanchions—by heating red and allowing to cool—before soldering, which will make bending easier afterwards; (b) to keep rails parallel when soldering lay out a piece of cellulose tape on a board with a couple of drawing pins, *sticky side up,* then when the long wires are laid on it they will remain in position.

To convert the cab cut two spectacle plates, both with circular "specs," with the necessary curve to fit the boiler cut from the front one. Glue short lengths of fine wire across the rear spectacle-plate openings—four to each—to represent the guard irons. Cut a plain rectangle for the roof, which has a slight overhang all round. Give cab components two coats of shellac on both sides and put aside to dry. A slight curve can with advantage be imparted to the roof before it dries right out.

While drying, file off the cab vent on the casting and "key" the surfaces to receive the new cab portions with criss-cross scratches so that the glue will hold firmly. Saw off the chimney dome and safety-valve pillars and file smooth at these spots. A commercial chimney and dome can be used, but, as the casting will not take solder, fixing is a bit of a problem. One solution is to insert a short piece of Rawlplug in the chimney and/or dome base and then fix with a small screw (and washer if necessary) inside the boiler. My own boiler fittings were home-made as follows. Make the chimney from card discs and rolled gumstrip as shown in the sketch. Shape the dome from birch dowel and seat on a card disc shaped to fit the boiler diameter by smearing on one side with cement, which causes contraction, and if the disc is clipped to the boiler with an elastic band for an hour to harden off it will automatically assume the correct contour. (Allow the surface of the cement to set before clipping to the boiler so that it does not adhere.) To achieve the necessary radii at the chimney base and lip and dome base, smear round a liberal fillet of Seccotine, which assumes a realistic curve as it dries out. Give a second application if the first dries away too much, leaving too pronounced a radius; then give both dome and chimney two coats of shellac. For the safety valve drill two small holes for the pillars, which are made from 18 S.W.G. brass or copper wire, file the ends to a slight taper, then tap home tight into the casting. Bend the lever from another small piece of wire and secure with a touch of solder. Glue the chimney and dome in place with Durofix after suitably keying the metal surface; such fixture could advantageously be reinforced with a screw.

Glue the cab front, roof and rear in position after double gluing (as in "Jinty"), and when dry give two further coats of shellac, when the body will be ready for painting.

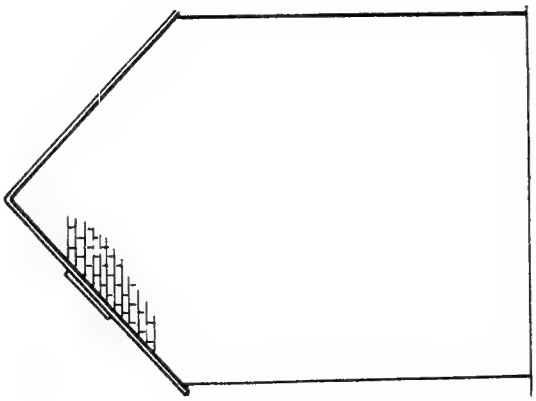
These engines, designed by T. Whitelegg for the L.T. & S.R. in 1903, passed to Midland Railway ownership just prior to the 1914-18 war, and I finished my model in the livery of this company, i.e. "Midland Red" (crimson lake approximately), with yellow lining and black panelling. The tank and bunker panels were lined with thinned yellow paint applied with a ruling pen, and the surrounds painted black. The boiler bands were made by ruling black lines on some yellow waterslide transfer sheets, then cutting them to the required width with a razor blade, leaving the narrow yellow edging. To increase "stickability," the location on the boiler where they would be positioned was first brushed with Seccotine, then the bands were affixed in the normal manner. The numerals for the tank sides were cut from the same yellow transfer sheet, when the "warming" effect of a couple of coats of shellac given now to the whole model (except smokebox and cab roof, which are left matt black) gives a fair representation of the original brass finish.

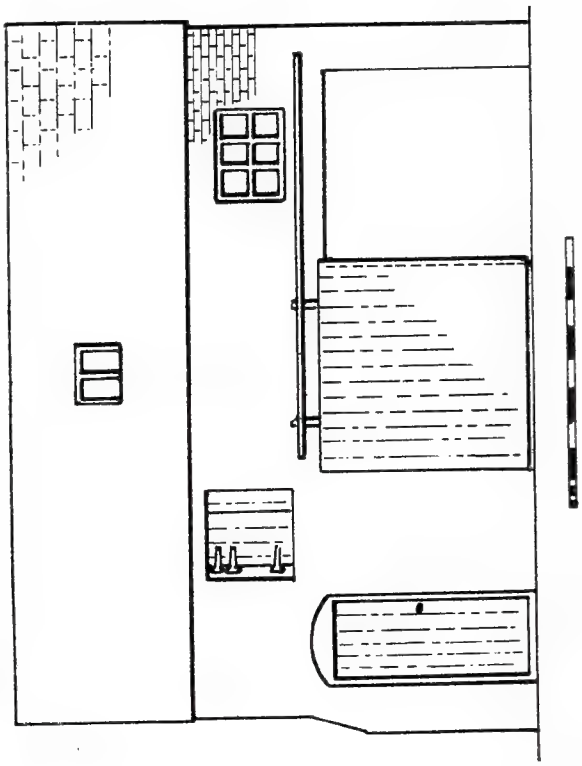

ASSEMBLE COAL RAILS
THUS
RIGHT ANGLE BEND AFTER SOLDERING
BEND THUS TO FIT INSIDE BUNKER, AFTER ASSEMBLY
LIBERAL FILLET OF GLUE ALL ROUND
STOUT CARD OR 3 PLY, TIGHT PUSH FIT
BUNKER PORTION SHOWING HOW COAL RAILS ARE SECURED
CAB DETAIL
WIRE GUARD IRONS ON REAR SPECS.
CUT TO FIT BOILER
SLICE OFF BARREL
END DISC
GUMSTRIP - ROLL ON WIRE TO REQUIRED DIAMETER
CARD DISC CURVE TO FIT BOILER CONTOUR
FILLET OF SECCOTINE GIVES NECESSARY RADIUS
CHIMNEY DETAIL
PORTION OF RAWL PLUG
WASHER IF NECESSARY
DRILL FOR PLUG IF NECESSARY, THEN FIT AS CHIMNEY
ATTACHMENT OF COMMERCIAL CHIMNEY AND DOME.

How to make

A SMALL INDUSTRIAL BUILDING

by P. W. A. Milner



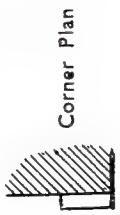


THIS small building, the design of which is based upon a prototype example, should prove a useful addition to almost any layout. Modelled in the "full" or as a semi-flat it would occupy a negligible amount of space, and is capable of being adapted to serve any one of a number of purposes. In its original state it is characteristic of decayed industry. The bricks and paintwork are weathered and worn and the sliding door merely hangs from a somewhat rusty iron rail, which can be represented by a length of wire bent at right angles at each end and inserted into holes in the wall. When closed the door is secured by a padlock. If modelled in the open position, as in the drawing, a piece of thin card slightly smaller than the door should be glued between it and the wall so as to prevent the two from touching. The walls should properly be built up from layers of thin card. The effect of the window and door frames being inset only about a scale inch and a half can then be achieved.

Those who require something a little less drab might brighten up the paintwork, add guttering and pipes and with a couple of petrol pumps convert the building into a small country garage. The main garage might well be a separate timber erection with corrugated-iron roof, and our small building would then serve as an office. The sliding door could be removed and the opening filled with a small window displaying accessories.

The enthusiast who likes soldering might like to use the building as a small forge, making a few wrought-iron gates from wire to stand in an adjacent yard as examples of the smith's work, while the ship-lover may prefer to model it in stone and site it as part of the background to a small harbour. Other ideas will no doubt occur to the reader.

The rear elevation has not been shown, but if the back is to be modelled a door, a couple of windows and, perhaps, a lean-to extension should be sufficient.



Drawing full size 4mm. scale.

Colour plan :

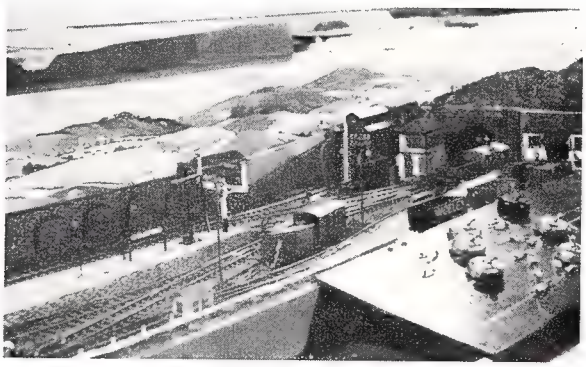
Roof	Slate
Walls	Brick
Paintwork	Brown

WEEKEND IN EDINBURGH

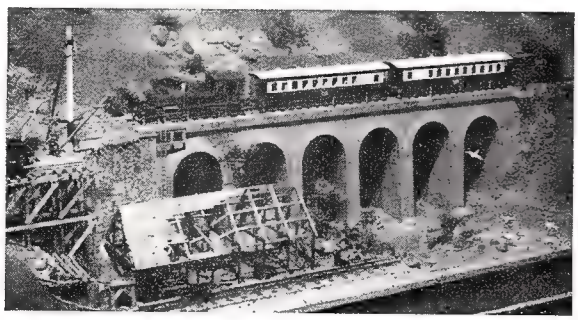
Photos by Eric Blakey, David Odabashian, C. J. Freezer.

Above : Ken Northwood at Torreyford controls on the North Devonshire.

Below : A corner of the Charford Branch.



Views on the Craig and Mertonford. Note the flight of swans by Glenmuir viaduct.



WE arrived at George Stanley's within a few minutes of six o'clock. This was quite an achievement, as we left Manchester earlier that morning in Lawrence Sowersby's car without either knowing the exact route we were to take or, more important still, exactly where George Stanley lived in Edinburgh. Fortunately the directions in Scotland are considerably better than my native London's " Strite on, mite, yer can't miss it." Actually, when the programme was first planned, and the Edinburgh and Lothians Society extended an invitation to the Manchester Model Railway Society to spend Whitsun as their guests, we had intended to go by train, but with the rail strike hanging over our heads like the sword of Domocles it seemed advisable to provide our own transport. Furthermore, the party had shrunk to four: Lawrence Sowersby, David Odabashian and myself from Manchester, and Eric Blakey, another country member, from Huddersfield. However, despite the worry over travelling, the visit was worth while, and I am only sorry that more Manchester people could not make it.

After a very welcome cup of tea we all five piled into Lawrence's stalwart 10 h.p. Austin and drove to Ken Northwood's North Devonshire Railway. As Ken has described the latest developments elsewhere in this issue I will not dwell overlong on his line, except to say that the running is superlative, and the silence of the track has to be " heard " to be appreciated. There is a lot of room in Ken's attic despite the enormous size of the North Devonshire itself, which is one good reason for living in a bungalow. We not only found a large table groaning under the weight of a high tea, Ken Northwood, David Kelso and all, but strung out in the middle of the attic was John Charman's Charford Branch. Unfortunately John's weekend leave had been cancelled, as his unit of the R.A.F. was on standby duty because of the railway strike, so David Kelso demonstrated the system for our benefit. Again the running was excellent. Before I leave this system I should like to mention the remarkably firm ladder that Ken Northwood found installed when he took the house over.

Our next move was to P. D. Hancock's Craig and Mertonford. We have already published a large number of photographs of this wonderful system, and we have details of extensions that have taken place in recent months awaiting publication. I can only say that good as P.D.s photographs are the line itself is even better, for there are innumerable small touches which just do not show up clearly in the photographs—the only thing that would do this line justice is full colour 3D. Usually one expects the running on a wholly scenic line, particularly as that line is narrow gauge, to be rather indifferent, but in this respect the Craig and Mertonford is the exception. P.D. seems to be upset because it is not up to the standard of Ken Northwood's, but then as Ken finds his scenery below P.D.'s level I think they can be adjudged quits. I will say this, I have seen many lines of which the owner was completely proud, but where running was not within miles of what I saw at P.D.'s that evening.

On Sunday morning we went to see Mr. Clutterbuck's 2½in. gauge outdoor railway. This will be, when completed, a remarkable piece of work. It is certainly surprising to see a line built to this gauge nowadays, and what is even more remarkable is that Mr. Clutterbuck only began work after the war when 2½in. gauge had long been considered the sole province of the live steamer. I can now fully appreciate Lord Brabazon's remarks to the effect that one almost expects owners of these large-gauge railways to earn dividends by carrying minerals.

We were met there by Sir Eric Hutchison, president of the Edinburgh and Lothians Society, and went with him to Wormit, where Gavin Wilson is building a really superb " OO " gauge model of the old Highland Railway. As readers may remember, there was a derailment at Wormit late on Whit-Saturday night, and as Gavin's house lies directly overlooking the Tay Bridge we had a full view of what is fortunately the rarest sight on British

A corner of Mr. Clutterbuck's 2½in. gauge line.

Railways. Gavin's line is the only 4mm. gauge layout we visited which has not been featured in our columns, although we do hope to remedy that omission when he has completed the line. As you will see by the photographs, the scenery is not yet fully in place, but apart from this the line is virtually complete and the rolling stock in particular is outstanding. There is a large stud of Highland locomotives and a good selection of rolling stock built in the home workshops, as well as a selection of Exley coaches. While the other 4mm. lines we saw were all two-rail, this one was stud-contact, although the studs were so skilfully arranged that they did not obtrude and the general picture presented was wholly convincing.

Monday dawned fair, which was just as well, for we were to visit the Forth Bridge; but as clambering over practically all parts of this gigantic structure can hardly be called railway modelling, I think it best not to take up much of my very limited space on this point, or on the interesting visit to Mr. Farr's private museum of engineering relics which occupied the afternoon.

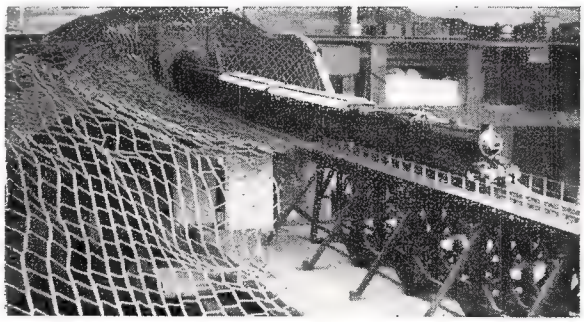
In the evening, after an official get-together with the club as a whole, we went round to the clubrooms. For some reason the majority of the clubs seem to have their premises in the most unusual locations. I have at various times climbed step-ladders, picked my way gingerly over station yards and even delved into the bowels of one of our larger termini, but I think that Edinburgh has the best approach of them all, down a narrow alley-cum-stairway in one of the older parts of the town. The club layouts are particularly extensive, yet such is the extent of the premises that it will be possible to throw them open to the public.

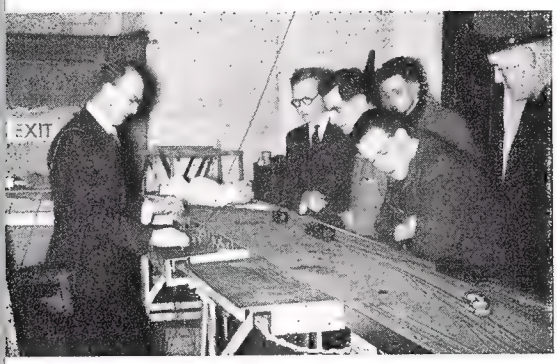
It would be impossible to detail all the incidents in a very crowded weekend, but I would like to express my appreciation for a very typical piece of warm Scots hospitality In case anybody is wondering, despite the strike I had an uneventful if tedious journey back to Devon via London, which took two days instead of the usual one. However, somewhere along the way the haggis which was presented to me must have escaped, for I haven't seen it since.

C. J. FREEZER.

The Wormit derailment from Gavin Wilson's garden. The start of the Tay Bridge can be seen in the background.

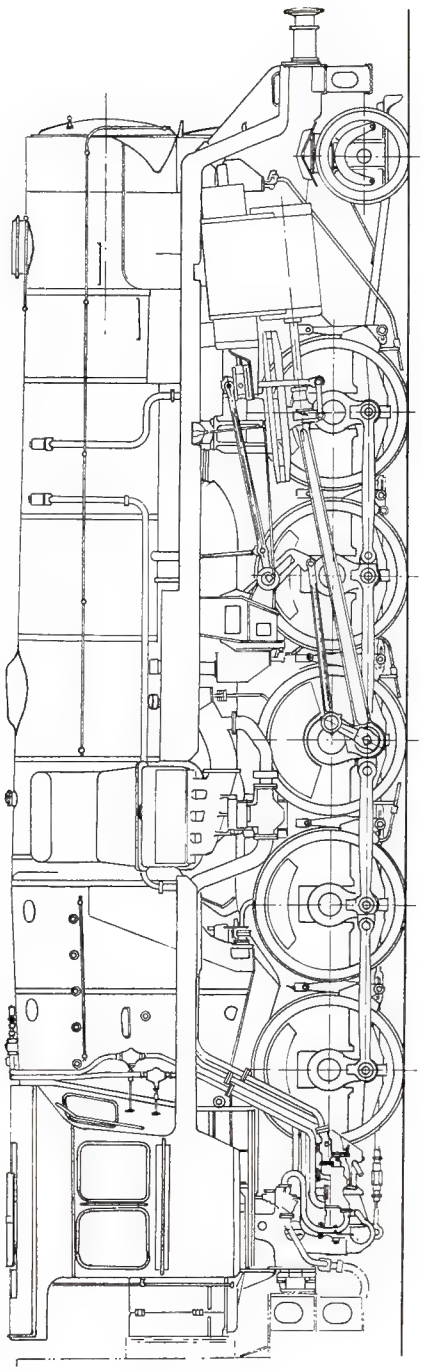
Two views of Gavin Wilson's Highland Railway system. Note the mesh foundation for scenery.





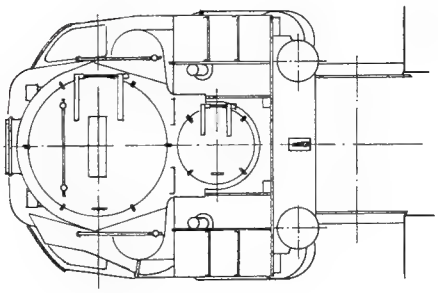
The Editor tries his hand on the club's "OO" gauge switchboard.

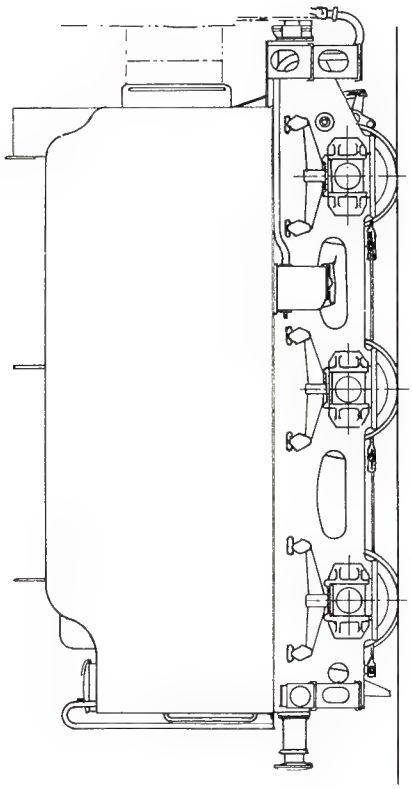
Before we left we received a haggis apiece. Eric Blakey kept his in captivity long enough to eat it, but, as can be seen, took every precaution when serving.



LEADING DIMENSIONS

Cylinders (2), dia. and stroke 20in. x 28in.
Wheels, coupled, dia. 5ft.
Wheels, tender, dia. 3ft. 3½in.
Wheels, pony truck, dia. 3ft.
Wheelbase, coupled, 21ft. 8in.
Wheelbase, engine, 30ft. 2in.
Wheelbase, engine and tender, 55ft. 11in.





DRAWING Scale 4mm. = 1ft.

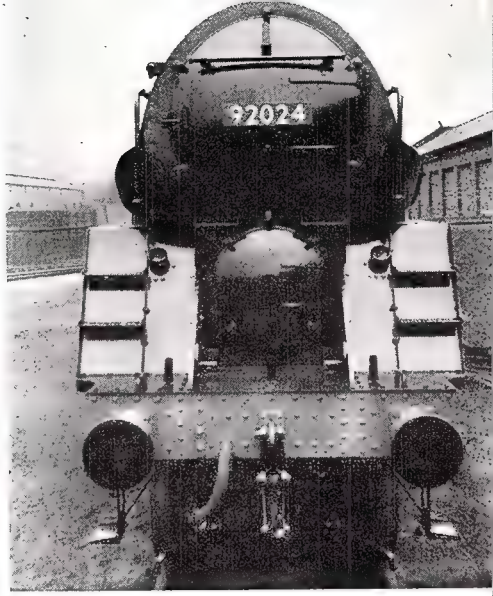
Produced from official blueprints.

B.R. CLASS 9F 2-10-0

WITH FRANCO-CROSTI BOILER

B.R. Nos. 92020—92029

Photos : British Railways



Prototype of the Month

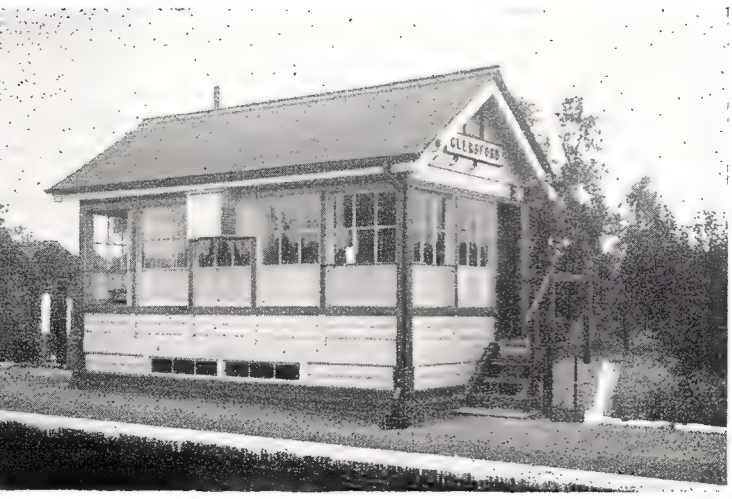
THE SHELFORD–
BRANCH

by C. Gordon Watford

The station building at Glemsford.

Above : Stationmaster's house and level crossing, Glemsford.

Below : Glemsford signal box.



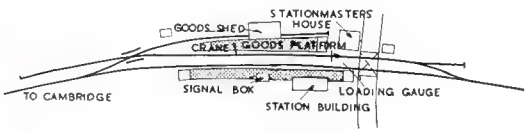
THE line is single throughout, leaving the main Liverpool Street—Cambridge line at Shelford on a sharp, check-railed, left-hand curve. Climbing steadily for several miles, the small stations of Pampisford and Linton are encountered before arriving at the end of the first block section, Bartlow Junction. The layout here could well be adapted to fit into a bay window, with the branch line to Saffron Walden curving into the window and finishing abruptly behind a shoulder of hillside.

Continuing eastwards from Bartlow, the second junction station on the line is entered after a climb of over six miles. Here the Colne Valley Line departs south-eastwards, and the train tokens are exchanged once more. Leaving Haverhill behind, the line meets the valley of the River Stour, which it follows the rest of the way to Long Melford, where it joins the branch from Bury St. Edmunds to Marks Tey.

The character of the Great Eastern is well depicted in the branch. One of the most striking features is the extreme size of the level crossing gates at most of the intermediate stations. The gates are all opened by hand. Another unusual feature is the ornate design of the posts supporting the platform roofs, and also the intricate design of the roofs themselves. There are several different designs of goods sheds on the branch, varying from the brick and timber built shed at Glemsford to the rather more modern all-brick structure at Linton, which incorporates a small goods office.

The peculiar Great Eastern ground signals, which revolve sideways instead of tilting diagonally as do those on the Southern Railway, are located at all the stations. Signals are both upper and lower quadrant semaphores, mounted on either square wooden or latticed iron posts.

An interesting station from the modeller's point of view is Glemsford. Here there are some delightful buildings and a simple yet



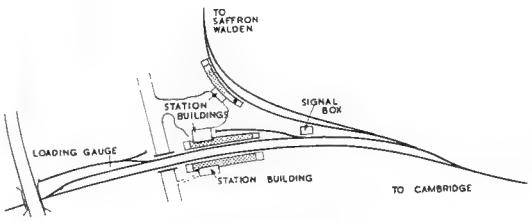
GLEMSFORD

LONG MELFORD G.E.R.

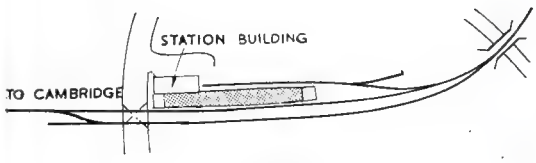
workable goods yard. If one intends to model this station accurately, the best idea is to devote the whole of one side of the room to it. It would be quite possible, however, to retain the general appearance of the prototype in as small a space as 8ft. x 1ft. 6in. if necessity demanded.

A second station could be incorporated on the far side of the room. Sturmer station lends itself to location at the approach to a corner of the layout, with its curving approach at one end. With this station the undulating land contours suggest that the open-top method of baseboard construction be adopted, in order effectively to model the lane which burrows underneath the track at the curving end of the station.

If you cut the track boards about an inch wider than you need for the width of the track, you will have room to glue and pin the strips of sacking which will form the foundation of the embankment. I do not believe that frequent formers are really necessary, because when using a mixture of alabastine and sawdust spread over a framework of sacking, provided that newspaper is packed underneath to give the desired shape to the sacking, the alabastine earth-mix will dry as hard as a rock, and will thus need little or no support from beneath.



BARTLOW



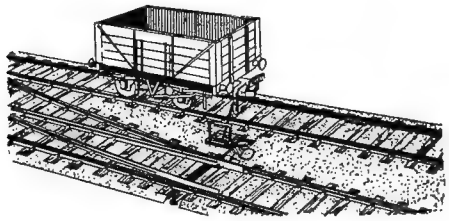
STURMER

Cavendish : station buildings incorporating station-master's house.

Above : Glemsford goods shed from the road.

Below : Linton goods shed.

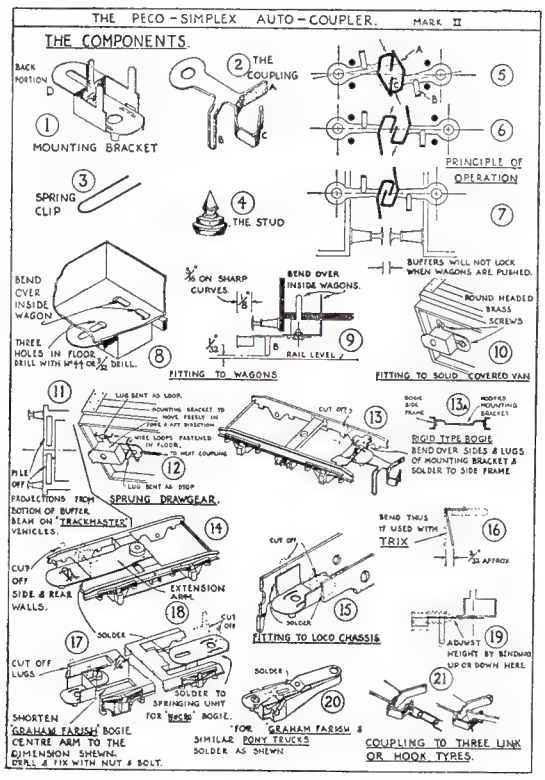
Peco Topics



MOUNTING THE PECO-SIMPLEX AUTO-COUPLER

THE Peco-Simplex Auto-coupler is fully automatic in use, engaging when the vehicles are pushed together and uncoupling either by means of the decoupling units provided or, if so desired, by hand at any point on the layout. The coupling is robust in design and has a reasonable tolerance in order that slight maladjustment will not affect the operation. However, for maximum efficiency certain important points should be noted when fitting the coupling to the vehicle.

The optimum location of the coupling is shown at (9) on the diagram. The most important dimension is the height of $\frac{1}{32}$in. above the rail lever and the striker arm. If it is not possible to mount the coupling bracket at precisely this height, the final adjustment can be made by cranking the coupling hook itself directly behind the striker arm with the aid of a small pair of pliers as in (19). The height should be checked by laying a piece of metal or hard fibre $\frac{1}{32}$in. thick over the rails and noting that the striker arm merely brushes over the surface. If this dimension is not adhered to, the decoupling units will not be completely effective, while if considerable variation in height occurs the coupling may become disengaged when the train is in motion.



In the case of locomotives where a bogie or pony truck is fitted on the leading end (and trailing end in the case of tank locomotives), the coupling should be fitted to these. In the case of 0-6-0s, 0-8-0s and the front end of 0-6-2 and similar tank locomotives with a rigid wheelbase, the coupling bracket is mounted between the frames as shown in (15). From this description and diagram it will be apparent that the coupling bracket has a universal application, but if you should meet a particular case which does not appear to be covered we shall be happy, on receipt of full details, including preferably a sketch of the chassis arrangements, to advise you of the best method of dealing with the problem. Where a locomotive is being built in the home workshops, it is advisable at the very outset to consider the coupling fixing and incorporate this in the chassis fixing. This will not only save a considerable amount of trouble, and possibly heartache, in the final stages, but will enable running tests to be carried out on the chassis before the completion of the locomotive body itself.

The projection in front of the buffers is sufficient to enable the coupling to be used on layouts with reasonable radii without buffer-locking, but where very sharp curves are in vogue the coupling should be extended $\frac{3}{16}$in. in front of the buffers instead of the $\frac{1}{4}$in. shown in order to gain much-needed clearances.

Due to the unique patented design the Peco-Simplex Auto-coupler takes both pulling and pushing loads, and a train fitted throughout with this coupling can be backed over the most complex pointwork with complete confidence, as there is no risk whatever of buffer-locking provided the coupling is correctly adjusted in the first instance.

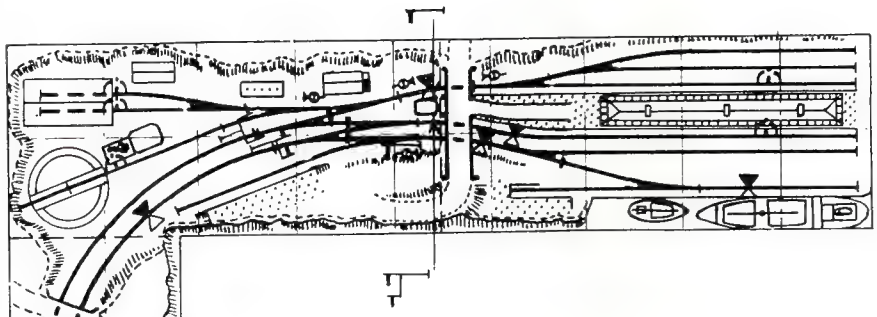
On four- and six-wheel vehicles the coupling is mounted directly to the vehicle body, but in the case of bogie vehicles it should be mounted on the bogie itself, due to the considerable displacement between the ends of the coach bodies when negotiating curves of any description, particularly the 15in. or reverse curve. These remarks apply, of course, to any type of coupling.

It is impossible in the space available to go into full details for fixing the coupling to every type of bogie currently available, but generally one of two courses can be adopted. On a rigid-type bogie the sides and lugs may be bent over as shown in (13) and soldered to the bogie sides. Alternatively the extension arm can be fixed to the end of the bracket and soldered, or pinned to the bogie bolster as in (14).

Layouts for the Modeller

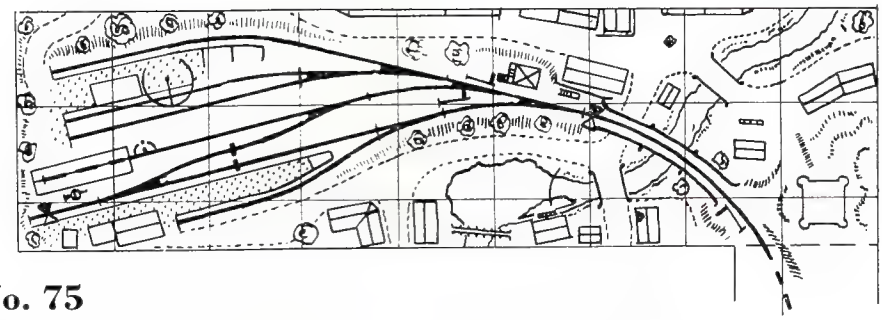
THREE TERMINAL PLANS

by John A. N. Emslie



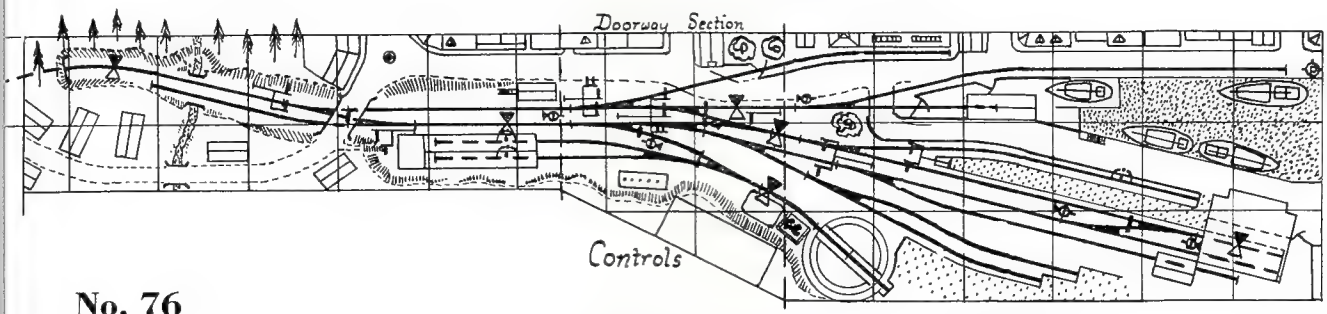
No. 74

This small terminus, based on Kyle of Lochalsh, Highland Railway, occupies an "L" site 9ft. x 6ft. 6in., with an extension on the shorter side to the hidden sidings.



No. 75

This simple terminus can be used above, or in conjunction with layout 74, the total area needed for the two being 9ft. x 10ft. The layout is based on Ballycastle, N.C.C. narrow gauge.

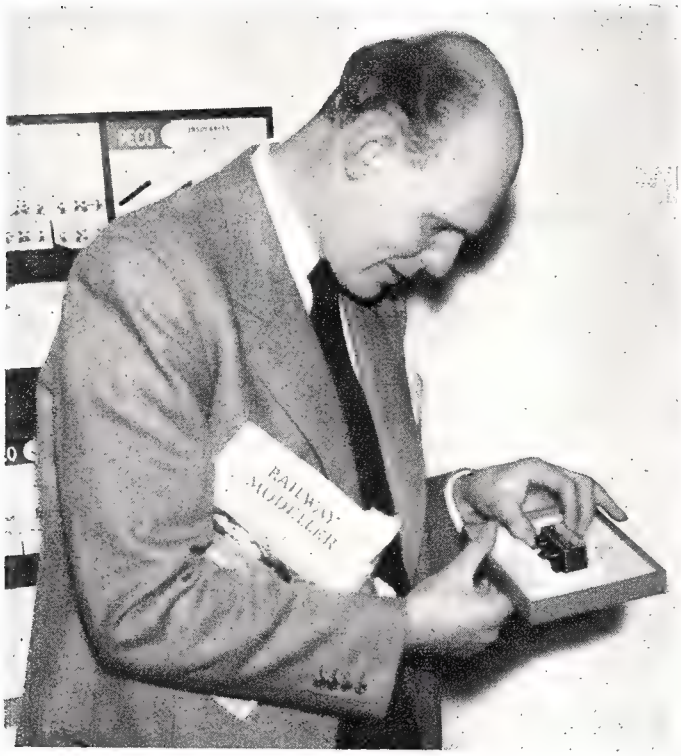


No. 76

This layout requires a clear wall space of some 17ft., with room for hidden sidings or a reversing loop in addition. It represents a fair-sized single-track terminus at a small port, and offers plenty of opportunity for interesting traffic working.

On all plans each square measures 1ft. x 1ft. for "OO" gauge.

DAVID NIXON TO OPEN HOBBY SHOW



As we close for press we learn that none other than the popular television and radio personality, David Nixon himself, is to open the Model Railway Hobby Show at the Central Hall, Westminster, on October 19.

The custom of asking a prominent member of the entertainment world to open exhibitions is by now a well-established one, but in this case the choice is particularly appropriate, as David Nixon is a genuinely keen enthusiast who, like so many of us, finds relaxation through railway modelling, and is a regular reader of the RAILWAY MODELLER. Our photograph was taken on the Peco stand at the Model Railway Club Exhibition earlier this year, through the courtesy of George Weston, of Messrs. Kirdon Ltd.

As is our usual custom, we shall be giving you a preview of the exhibition in our special October issue.

Order your copy now, and don't forget the dates—October 19-22.

FIFTH JOINT CONFERENCE OF MODEL RAILWAY CLUBS

The fifth annual joint meeting of the Manchester Model Railway Society and the Model Railway Club will be held on Sunday, October 2, 1955, at the Imperial Hotel, Birmingham, commencing with lunch at about 1 p.m., following with a short business session, and closing with a general discussion and get-together over the models brought along, during which afternoon tea will be served. All established clubs are invited to send one or two representatives to this meeting, and delegates from the London area are invited to travel with the M.R.C. party. Notifications, stating whether lunch is required, should be sent to Mr. D. A. Boreham, hon. secretary, M.R.C., at 10b (note 10*b*) Ealing Road, Northolt, Middlesex, by September 24. Secretaries of affiliated clubs will be notified separately.

Each delegate should bring *at least* one model with him, and preferably more.

N.M.R.A. (BRITISH REGION) ANNUAL CONVENTION

The annual convention will be held at Brighton on October 1 and 2. A full programme has been arranged, including, as always, something for the ladies. Details may be obtained from R. G. Bradshaw, 40 Waterloo Place, Hove 2, Sussex.

Meetings are now being held regularly in London, Birmingham and Manchester. Interested readers will be welcome at any of these meetings, particularly members of U.S. and Canadian armed forces stationed in Britain.

Address any inquiries to the P.R.O., M. Jones, 57 Linden Road, Gillingham, Kent.

"THE LINK" IS TWENTY-ONE YEARS OLD

In July *The Link*, the journal of the Manchester Model Railway Society, achieved its majority with the 219th issue. We believe that this is the oldest model railway club journal; certainly twenty-one years of continuous publication is a considerable achievement for an amateur production. The celebration issue contains no less than thirty-six duplicated pages enclosed in an attractively printed two-colour cover featuring a 4mm. scale drawing of a Furness Railway 0-6-0T No. 21. An account of the early history of *The Link* is included, in addition to the usual collection of articles on all aspects of the hobby, ranging from the severely practical to the light and humorous. Our friend Bob Inkster, the able editor of *The Link* and its young offshoot the *Talyllyn News*, is to be congratulated on a fine piece of journalism.

CLUB NOTICE BOARD

featuring popular personalities and society news

Personality Parade No. 45

C. J. Capel

West Wickham Model Railway Club

C. J. Capel has been a member of the West Wickham Model Railway Club since it was founded in 1949. He first started to take an interest in model railways at the age of five after having been given a small Hornby gauge "O" tank loco and four wagons.

The purchase of a secondhand Twin Trix layout in 1943 aroused further interest, but the operating facilities were not appreciated until another loco was purchased just after the war. This was subsequently given up owing to its non-scale appearance and he ventured into the new Hornby Dublo system. The Duchess of Athol set was purchased first, a goods set followed soon after, and a complete layout was laid down.

NOTES AND NEWS

Copy for these columns must be received five weeks before publication.

E.M. GAUGE SOCIETY

The inaugural meeting of the above society will be held at 7 p.m. on Saturday, September 10, at the Orange Tree Inn, Euston Road, London, which is near the entrance to Euston Square underground station. All inquiries should be addressed to the acting secretary, J. L. K. Mann, 3 East Drive, Watford, Herts.

BOLTON MODEL RAILWAY CIRCLE

Due to business commitments, the honorary secretary, Mr. E. D. Whittle, has resigned, and his successor, Mr. J. Hulock, would be glad if all future inquiries would be addressed to him at 70 Lonsdale Road, Bolton.

HISTORICAL MODEL RAILWAY SOCIETY

Mr. F. C. Hambleton will give a talk entitled "William Pollitt and his G.C.R. Locomotives" to the Historical Model Railway Society at 7 p.m. on September 26, 1955, at the headquarters of the Stephenson Locomotive Society, 32 Russell Road, W.14.

SUNDERLAND AND DISTRICT MODEL RAILWAY CLUB

As from May 8, 1955, the Wearside Model Railway Club has ceased to exist and its place has been taken by the above-mentioned club.

The premises used by the Wearside Model Railway Club (and later by the Sunderland and District Model Railway Club) in Prospect Row, Sunderland, have been given up. Negotiations are in their final stages to acquire new premises, and these now need only the approval of tenancy by the local council.

The first aim will be to erect an "OO" gauge layout and also an "O" gauge test track, to accommodate both electrically and live steam driven locomotives.

New members are needed, and all interested are invited to contact R. Lofthouse, hon. secretary, 31 Darien Avenue, Fulwell, Sunderland.

ORPINGTON AND DISTRICT MODEL RAILWAY CLUB

Every Friday evening in the clubroom on platform 1 at Chislehurst station work is in progress enlarging and modifying the "OO" gauge layout in readiness for our public exhibition to be held on Saturday, October 1, at Bromley Public Library.

"O" gauge enthusiasts are also busy on their fine-scale layout, and the junior section have recently started work on a 6ft. x 4ft. layout in "OO" gauge.

New members are always welcome any Friday evening, or may write to the hon. secretary, Mr. McDonald, 24 Oxhall Crescent, Petts Wood, Kent.

SLOUGH RAILWAY CIRCLE

The inaugural meeting of the Slough Railway Circle took place on Wednesday, July 13, and an encouraging number of enthusiasts gathered to become founder members. It was decided that activities should be as comprehensive as possible and that the accent should be placed on visits to places of particular interest to the majority, and also to foster the encouragement of members who are model railway enthusiasts even if not active railway modellers.

Work will commence immediately on the construction of a proprietary "OO" gauge layout, a fine-scale 16.5mm. layout, and sufficient gauge "1" track to enable steam locomotives to have non-stop running within the confines of the clubroom. The last-mentioned section will be fortunate in having the advice and guidance of Captain Warrell, who can bring to bear many years' experience as one of the leading exponents of gauge "1."

New members, whatever their interests, will be extremely welcome, the only qualification being that they must be eleven years of age or over. Club night has been fixed for Fridays at 7 p.m.

Will anyone requiring further information please contact A. Rowley (acting secretary), 40 Meadow Way, Old Windsor, Berks. Telephone Windsor 2794.

FORTHCOMING EXHIBITION

On September 24 the Southgate British Legion are holding a model railway exhibition (by kind permission of Lt.-Col. S. N. Beattie, M.B.E.) and flower show at the Hollies Hall, Nursery Road, Southgate, N.14.

The Southgate Hobbyshop will be exhibiting, demonstrating model railway construction as well as a general craft display.

SEPTEMBER MEETINGS

BIRMINGHAM MODEL RAILWAY CLUB

8 Open meeting.
14 Exhibition layout maintenance.
18 Visit to Bournville shed, 11 a.m.
22 "Some thoughts on control." C. J. Freezer.
28 16.5mm. layout construction.

BOLTON MODEL RAILWAY CIRCLE

15 39 Rowena Street. Talk on "The Railways of Germany."

BRISTOL 7-4-2 CLUB

4 Summer outing.
16 Talk: Railway signalling. Track running or working nights held every Friday, 7.30 p.m., at 1 Richmond Park Road, Clifton, Bristol 8.

COULSDON MODEL RAILWAY SOCIETY

5 L.C.C. tramways. D. G. Norman.
19 Running night.

HODDESDON AND DISTRICT MODEL RAILWAY SOCIETY

14 Some more track wiring problems.
28 Be up-to-date on adhesives.

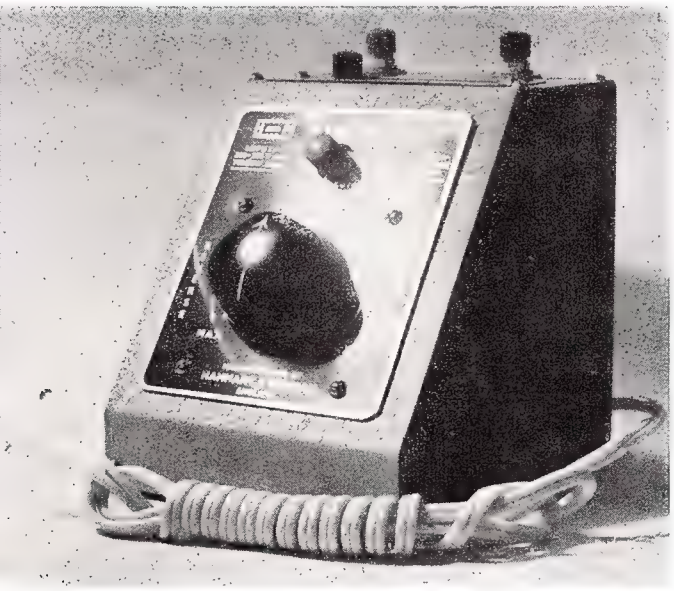
MODEL RAILWAY CLUB

1 Track night—L.N.E.R.
15 Film show, by courtesy of London Transport. At Caxton Hall, S.W.1.
22 Track night: gauge "1."

WIMBLEDON MODEL RAILWAY CLUB

7 Photographic night

NEWS AND VIEWS OF TRADE INTEREST TRADE



The Hammant and Morgan " Minor " unit fitted with vari-wave control.

HAMMANT & MORGAN VARI-WAVE CONTROL

Messrs. Hammant and Morgan have recently introduced a modification to their optional half-wave retification units under the name " Vari-wave control." In place of the simple on-off switch which changed the output from full D.C. to half-wave pulse a variable resistance with a sliding control is substituted. This enables the operator to change smoothly from pulse power to straight D.C., or to " mix " the two.

We illustrate the popular " Minor " unit fitted with the vari-wave control. This retails at 60s., the vari-wave increasing the basic price of 48s. by 12s.

We had an opportunity of testing one of these units installed on Mr. K. Northwood's North Devonshire Railway. As readers will have seen from his article on page 198, Mr. Northwood had already carried out experiments with this form of control, and he pronounced himself highly satisfied with the Hammant and Morgan unit.

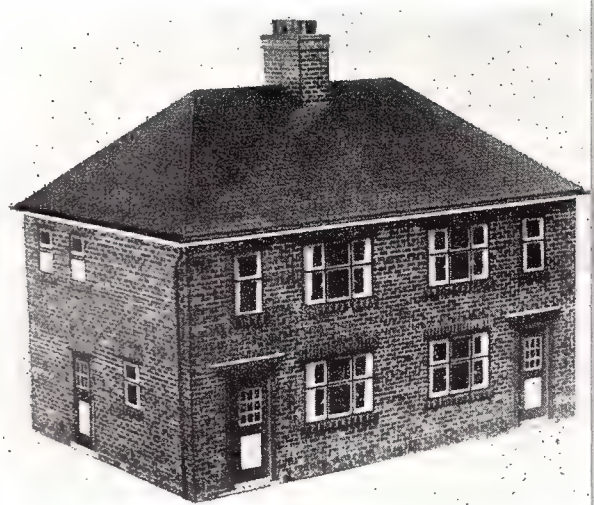
The unit is up to the usual high standards set by Messrs. Hammant and Morgan, and can be thoroughly recommended as a power supply for any " OO " gauge model railway.

NEW BILTEEZI SHEETS

Our illustrations show the first two sheets in a new series E in the popular Bilteezi range of card structures. Sheet E1 comprises a pair of semi-detached houses and sheet E2 a bungalow with garage. In accordance with the usual Bilteezi style, additional parts are provided on each sheet to enable the builder to vary the basic design, thus providing variety in the model town. Series E is intended to provide for a model housing estate of a predominately modern design and we have no doubt will prove as popular as previous series in this fine range. The price for each sheet is 1s. 9d., the standard price for all Bilteezis.

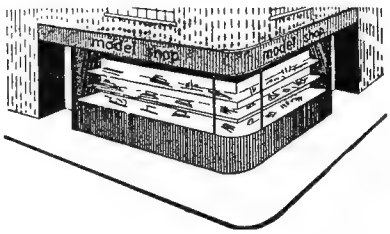
TWO USEFUL ACCESSORIES

Our illustrations show two useful " OO " gauge items produced by Messrs. Tyldesley and Holbrook. The water crane is a particularly pleasing example of a very common type of tank to be found on small stations and locomotive depots, while the girder bridge is equally useful as a road or rail overbridge. Both items are of soldered metal construction.

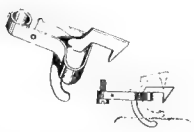


New Bilteezi sheets : Above, bungalow from Sheet E2 ; right, semi-detached houses from sheet E1.

WINDOW



KIRDON AUTO-COUPLER



Messrs, Kirdon have submitted for review a new auto-coupler they are manufacturing to retail at 2s. per set. Full instructions for fitting are enclosed with the coupling, which is fully automatic and will uncouple by means of a lifting ramp placed between the track. It is neat in appearance and the manufacturers state that it can be used with most proprietary and scale couplings.

TRADE ANNOUNCEMENT

Edward Exley and Co. Ltd. announce that in the near future they will be supplying their famous "OO" coaches in boxes. Furthermore, they now undertake to produce coaches in B.R. colours, and the popular Southern Railway electric train can be obtained in the colours of the three other pre-nationalization companies as well as in British Railways livery.

CATALOGUES RECEIVED

KIRDON (4d.).

Messrs. Kirdon's catalogue takes the form of a pocketed folder containing a series of leaflets describing the many new products introduced this year in addition to the well-known range of Kirdon controllers and power units.

PERCIVAL MARSHALL BOOK LIST (free).

The full range of Messrs. Percival Marshall's publications on hobby and other subjects is covered in this comprehensive illustrated catalogue.

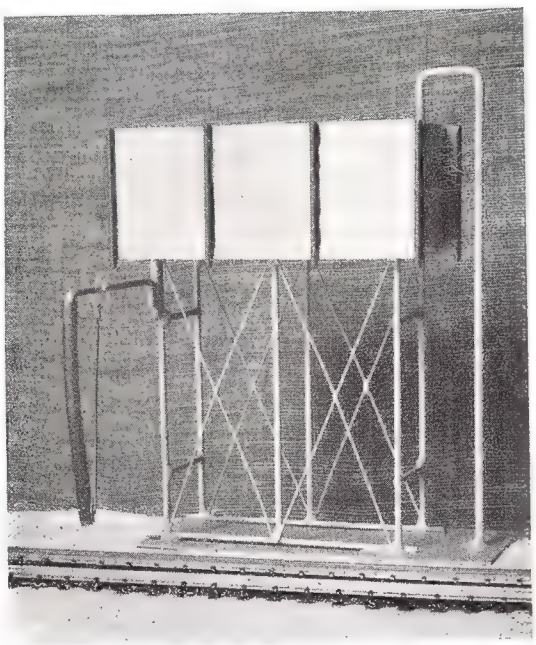
BOOK REVIEWS

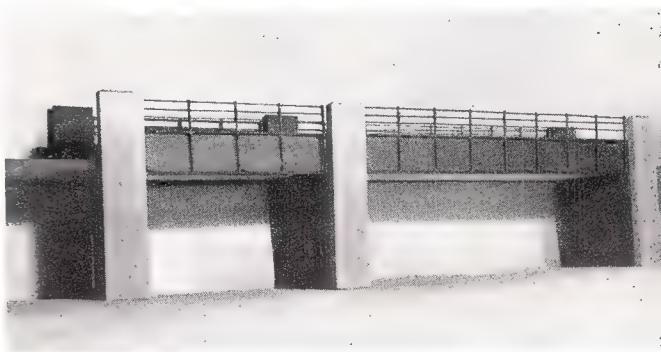
The Railway Engineers, by O. S. Nock. (Batsford, 18s.)

Truly there were changes on the earth in those days—not in stature perhaps, but in achievement. In a few short years the entire face of England was transformed by the rapidly growing railways. To do this a small body of men whose names are in many cases household words—the Stephensons, Brunel, Locke, Cubitt, Vignoles and Brassey, to name but a few—toiled almost without rest. Many of them paid the penalty and died, prematurely worn out at the height of their fame. When they had gone, the romantic phase of railway development ended and the story became that of the managers. O. S. Nock has given us here a volume of absorbing interest which deals with the careers of the great engineers but does not forget those who came after, men like Westinghouse and Saxby, whose work laid the foundations of railway safety as we know it today.

In this connection we found the only blemish in the book, for while some considerable space is taken up with the consideration of an abortive system of automatic train control pioneered by the North Eastern Railway, only a passing reference is made

(*Continued on page* 220)





New models by Tyldesley and Holbrook. Left: water tower; above, girder bridge.

READERS' LETTERS

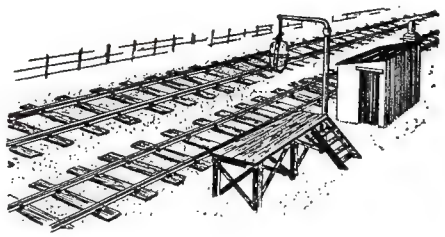
This space is reserved for the free exchange of readers' ideas and opinions

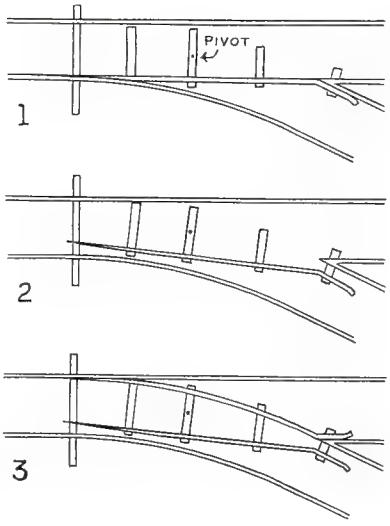
UNIVERSAL POINTS

Universal points on the Madder Valley Railway.

Referring to Mr. S. C. Pritchard's article in the July issue, readers may be interested to know that there has been a number of points of this type on the Madder Valley for eight or nine years. Hence I can claim to know something about them. There is no doubt that they give better and more reliable running than any other kind and this is especially true with points of abnormally sharp radius, where there is a natural tendency for long-wheelbase vehicles to jump the frog. It is an interesting fact that nobody has ever noticed that there was anything unusual about these points—until it was pointed out to them.

My points were, of course, made before HI section rail was available, but the following applies to practically any form of construction. The method—or sequence—of assembly is important if the job is to be completed as expeditiously as possible and the need for subsequent adjustment entirely avoided. The method I have used is illustrated in three stages and I am sure it is the best way to go about it.





Begin by laying the stock-rails and the frog. Then prepare one of the point blades (preferably, I think, the straight one) and attach the stretchers and the point rod to it. *Before adding the other blade,* pivot this first one in position so that it is true to gauge. The state of affairs at this stage is shown in Fig. 1. Now swing the blade on its pivot as much as is necessary to form the flangeways (Fig. 2). By the way, these drawings are not to any sort of scale at all; they just show the idea. The final stage is to mount the second point blade, being careful that the first one does not move around on the pivot while you are doing it. We now have Fig. 3. Take care that the blade is accurately lined up with the frog; the latter must not stand "proud" on any account. It goes without saying that this is even more important with the curved blade than it is with the straight one, because the latter is not subject to centrifugal stresses. If the work has been done carefully, the point will not require any subsequent fiddling at all, and everybody should be happy.

If any hypercritical "bod" comes along and proclaims that your points are not true to nature you just come back at him with the information that your line is very up-to-date and employs high-speed frogs. There is no answer to that one.

London. JOHN H. AHERN.

IT KEEPS FALLING OFF!

I'm afraid I don't quite see how Mr. Barnes ("It Keeps Falling Off!") is going to test his track satisfactorily with a pair of wheels on an axle.

I tried the same plan myself once upon a time, and found that it was all right for stationary tests, but when it came to moving along the line the method was quite useless, because if the wheels got what they call "skew-wiff" you thought that the track was faulty at that point where it was actually all "hunky dory," and vice versa.

In my opinion the best method, and perhaps the only method, of testing to see whether wheels will roll satisfactorily over a given track layout is to use a bogie, which you can shove up and down to your heart's content, knowing that the wheels are square to the axle and the axle keeps at right angles to the rails.

Incidentally, one other system (?) I have on the Wellsmeare Branch is to use what I call a "mixed fussy," this being a train composed of stock which for one reason or another is temperamental. The loco has a lively pony truck, the Weltrol has an annoying habit of negotiating the points with the front end, leaving the rear end to go straight on, and the brake van has an affinity for the sleepers at critical moments. If this train succeeds in traversing a given length of track, brother, it's a good length!

Weston-super-Mare. M. W. BROOM.

METROPOLITAN 4-4-0T

I notice in the June issue of the RAILWAY MODELLER what appears to be an error in the description of one of the locos illustrating "Alan Shackleton's Museum Layout."

The Metropolitan 4-4-0 is wrongly described as a "Crewe-Allen" type. It should be described simply as a "Metropolitan" type of Beyer-Peacock design, although its origins go back farther than that.

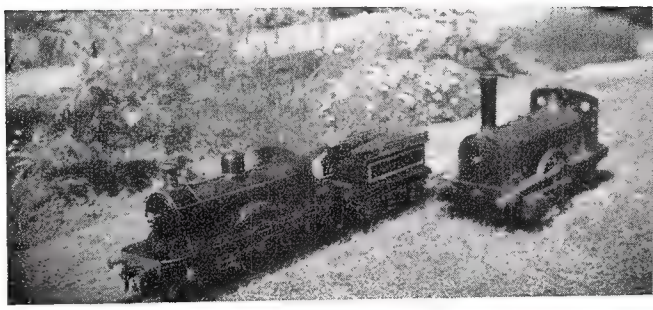
The "Crewe-Allen" or "Allen-Crewe" design was distinctive in that the sloping outside cylinders were enclosed between double frames, which were slotted to allow for inspection of the piston rod, crosshead and motion, very different in appearance from the Beyer-Peacock design.

I do not know how this confusion arose, but I have noticed before that a surprising number of model makers and model owners are often rather ignorant of locomotive design and locomotive history, two forms of knowledge which to me seem essential for the making of good locomotive models.

London. J. W. NOTTAGE.

G.E.R. REFRIGERATOR VANS

I was interested in the correspondence concerning the livery of the Great Eastern Railway refrigerator vans in the July issue, and I have a suggestion to account for the differences noted. Our local buses, when new from the paint shop, are pale yellow and a reddish shade of brown; just before being repainted, however, they have weathered to a very pale cream and ordinary brown. Perhaps this had happened to the G.E.R., and it would be more pronounced if accompanied by a change in the raw materials used in the paint.



See "Two Early Models."

In looking through the "Layouts for the Modeller" series I am surprised that so little use is made of the "Elmer's End" type of terminal layout in very small termini. For those not acquainted with this arrangement let me explain that it only requires an ordinary siding sloping upwards. The train is reversed up the siding and held there while the engine is uncoupled, runs forward and then back again on to the main line. The train is then released and runs down for the engine to be coupled up again. Surely it is just the thing for cramped layouts, and it would certainly add to the interest of operating.

By the way, to silence those who persist in telling you that those two locos cannot be run together on the same railway, that no such rivet exists on the prototype, that your first model is free-lance and therefore a hopeless mess, and many other similar things, you should say "I don't care what you think, Jack, but I'm doing very nicely!"

Burnley. D. GILBERT.

TWO EARLY MODELS

The enclosed photograph shows two rather interesting historical locomotive models now in my possession. The elder is the somewhat antiquated 2-2-2 which was built to 3½in. gauge size by a marine engineer in Troon in the 1890s. "Firing" was undertaken by placing a heated metal rod in a tube extending the length of the boiler and then hoping for the best!

The L.N.W. 4-4-0 "Clyde" is, I believe, an early Stephen Bing production of the type marketed by Bassett-Lowke Ltd. for 2½in. gauge about 1902. Unlike its companion it does still work, but its firing is by the more conventional methylated spirit burner.

Glasgow. JOHN A. N. EMSLIE.

CONTACTS WANTED

WORKINGTON, CUMBERLAND. Mr. J. Armstrong, of 60 Westfield Drive, Westfield, Workington, would like to meet fellow modellers in 4mm. scale in his area.

ADVICE BUREAU

The Bureau is at your disposal to assist you with your problems. The service is free, individual and personal, but we reserve the right to publish any query we consider to be of interest. The advice given is based on the experience and opinions of our staff.

Queries should be addressed to the Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, and should be accompanied by a s.a.e. and coupon on page ix. We regret that we cannot prepare special designs for individual readers.

I am interested in building models of narrow gauge railways and in particular the 1ft. 11½in. lines of which there are, or were, a number in Wales.

The use of 16.5mm. gauge involves a scale of 8.5mm.=1 foot, which is too large for my purposes. "TT" has, I understand, a gauge of 12mm., giving a scale of about 6mm.=1 foot, while "OOO," with a gauge of 9.5 or 9.0mm., gives a scale of 4 or 3.8mm. =1ft. 12mm. gauge would therefore be reasonably acceptable, but 9.5 or 9.0mm. gauge would be ideal, using a rail about 1.7mm. deep.

I would therefore like to have your advice as to the practicability of my project, and in particular as to whether wheels and axles and electrical mechanisms (preferably 2-rail) are available, and whether they are for 9.5 or 9.0mm. gauge. If sufficient information is available I would like to know wheel diameters, axle spacings of mechanisms, and the means of drive from motor to wheels.

D.Mc.M.H., BIRMINGHAM.

For 4mm. scale the generally accepted gauge for 2ft. to 2ft. 6in. gauge systems is 9mm., this being the gauge originally adopted by Mr. P. D. Hancock. A little work has been done in 6mm. scale on 12mm. gauge, but so far this combination has not caught the imagination of the public, although from many points of view it is very convenient. It has the great advantages that the problem of fitting motors in the locomotives is considerably simplified and that the common 12mm. diameter wagon wheel corresponds to the generally used 2ft. diameter narrow gauge wheel. Smaller "OO" gauge driving wheels suit locomotives, and, due to the larger scale, construction of the vehicles is considerably simplified.

The narrow gauge worker is very much thrown on his own resources for materials, with the sole exception of track and motors. In the case of track, Peco sub-standard rail is used and the smaller "OO" gauge motors can usually be fitted in the body, though with some difficulty in the smaller locomotives. Wheels are a definite problem, as only a few commercial wheels of the right diameter are available, the smallest "OO" gauge wheel being 10mm. in diameter, which is somewhat too large except for certain driving wheels, while "OOO" and "TT" wheels are not only very difficult to obtain but are in most cases too small. It is, however, quite practicable to have these wheels turned to your own specification by one of the many firms catering for special-purpose components, although naturally the cost is somewhat higher than for standard productions.

I have a fairly large layout, and I wondered if those parts of the track which are farthest from the transformer would need current leading in.

M.K.M., ROUSDON.

If you do not experience any appreciable diminishing of speed on any part of your layout there is no need for additional feeds to avoid a voltage drop. If this drop in speed does occur, then an additional feed should be made to the area affected.

BOOK REVIEWS

(*Continued from page* 217)

to the successful application of this important safety device by the G.W.R. from 1908 onwards. Possibly Mr. Nock decided he had already been sufficiently partial to the Great Western; in any case, this is a point which is apparent only because of the extremely high standard of the book.

The illustrations have been chosen in their entirety from contemporary illustrations. There are, as one would expect, many of Bourne's engravings of the early Great Western and the London and Birmingham, but there are many fine illustrations which are new to us. At this date that is no mean achievement.

The production is what one would expect from a Batsford book, first-class throughout, and the price is extremely moderate for a book of its size and quality. We can cordially recommend this book to all readers interested in the historical aspects of our railway system.

Model Railway Illumination, by E. F. Carter. (Percival Marshall, 3s. 6d.)

Many enthusiasts enjoy operating their layouts with the room lights extinguished, relying on the illumination given by lights on the railway itself. On a scenic layout particularly this is delightful, as the system takes on an aspect wholly different from its daytime one. Of course, a cynic may suggest that the darkness will hide innumerable faults, but having seen the Craig and Mertonford under these conditions we can say that the effect is enhanced when the layout is correctly proportioned.

There are, however, many pitfalls to be found in this matter of illumination, for while miniature lamps are obtainable they are expensive, and cannot usually be used indiscriminately. Moreover, careless use can considerably shorten the life of a lamp, and we are pleased to see that Mr. Carter not only stresses this important point, but also suggests that all lights be under-run to lengthen their life almost indefinitely.

He deals at great length with the popular practice of "piping" light from a hidden lamp of over-scale dimensions, and gives several methods of lighting coaches. However, it is the final chapter that is of the greatest importance, for here Mr. Carter describes, we believe for the first time in Britain, the system of high-frequency A.C. lighting which enables lighting current to be fed to the coaches through the same rails as the traction supply. For this chapter alone the book is worth the modest sum asked.

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A further addition to our well-known BILTEEZI range of building cards is now available as follows:

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PRICE STILL 1/9 per sheet, including tax. Postage 2d. extra.

SEND NOW for our scenic catalogue listing all our range of 21 BILTEEZI and 12 MERCO sheets, price 10½d., or our two catalogues of scenic and "OO" products—a total of 84 pages of "OO" modelling interest—price **2/-** (post paid).

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TWIN-TRIX BARGAINS—SETS, including double transformer, controller and 915 track formation, £8/10/- (list price £12/6/-). **RAILS** 1/6, hand points 12/6, remote points and switch 22/6, B.R. scale coaches 12/6, American switcher locos £3/10/-, B.R. 4-6-2 locos and tenders £6/19/6, 0-4-0 locos 45/-. **UNUSED RAILS** 2/- each.

GRAHAM FARISH 2-RAIL BARGAINS, ALL BRAND NEW—4-6-2 Merchant Navy locos £4/15/-, Golden Arrow locos £4/15/- (usually £5/14/6), wagon lit Pullman coaches 19/6 (30/-), suburban coaches 19/6 (25/-), New York Central coaches 19/6 (25/-), match and bolster trucks 2/6, 5- and 7-plank wagons 3/6. Second-hand items: King class locos £4/10/-, GP5 locos £3/10/-, Merchant Navy locos £3/19/6, prairie tanks £3, wagons 2/6, power units 40/- (65/-).

TWO-RAIL LOCOMOTIVES (new H/Dublo conversions)—2-6-4 tanks £4/15/-, B.R. Silver King £5/2/-, B.R. Duchess Montrose £5/6/-, L.M.S. Duchess Athol £5/5/-, L.N.E.R. Sir Nigel Gresley £5, 0-6-2 tanks £3/10/- (suitable Wrenn track).

NEW G.W.R. 0-6-0 PANNIER TANK LOCOS, 2-rail 47/6, 3-rail (suit H/Dublo) 52/6.

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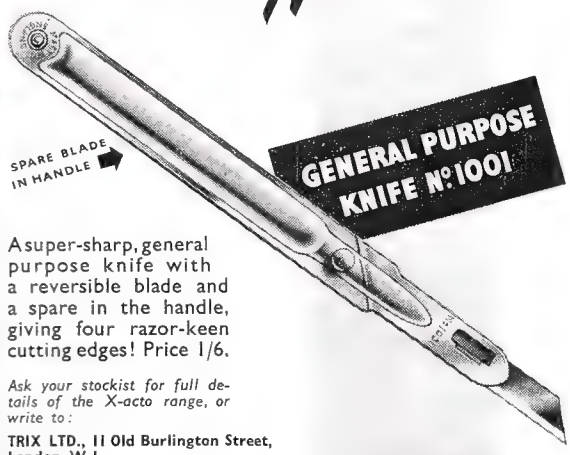
No. 34, 4½" long, ¾" deep—2/-, No. 35, 4½" long, 1" deep—2/6.

RAZOR SAW SET No. 53 with No. 5 handle and two blades—10/6.

NEW!



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FOR SALE

HORNBY DUBLO "Atholl" set. Transformers, accessories. Excellent condition. Cost over £13/10/-. Offers between £10 and £11. Dunbar, 35 Lochlea Drive, Ayr, Scotland.

FOR SALE. Trix "OO" train set, engines, rolling stock, rack points, etc., good condition. Cost over £60. £30 or nearest offer. Morgan, 138 Westbourne Road, Penarth, Glamorgan.

G.W.R. 0-6-0 pannier tank suitable Hornby Dublo. As new, £3. Delderfield, "Wayside," Dudswell, Berkhamsted, Herts.

GAUGE "OO." Exley coaches, parts, accessories, rolling stock and oddments. S.a.e. (foolscap) list. Below.

GAUGE "O" clockwork and electric locomotives by Bassett-Lowke, Exley, Beeson. Rolling stock, parts, wagons, track and oddments. S.a.e. (foolscap) list. Below.

RAILWAY and tramway books, photographs, tickets, colored postcards, Moore's colored plates, time-tables (public and working), guides, etc. Foreign and home. S.a.e. (foolscap), The Ridge, Baslow, Derbyshire.

WANTED

WANTED. "HO" gauge coaches by Reidpath, etc., L.M.S. particularly wanted, but any company considered. Details, price to Box No. 55/5.

WANTED. Farish "OO" 3-rail flexible track. Quantity and price. HURD, 104 Lower Oldfield Park, Bath, Somerset.

WANTED. Gauge "O" Bassett-Lowke L.N.E.R. streamlined Pacific. Clockwork. Blue. G.W.R. "County of Northampton." Clockwork or electric. 12-volt D.C. Royal Scot or Coronation Scot. Clockwork. Bing 0-6-0 tender goods engine. Any color. Hornby Schools. Hornby County No. 1 special tank. No. 2 special tank. Clockwork. Bassett-Lowke tinplate G.W.R. and S.R. coaches. Good prices paid for clean articles. The Ridge, Baslow, Derbyshire.

WANTED. S/H Graham Farish suburban 3rd brake compo coach, B.R. colours. Body in good condition. Quote price. McCaughey, Bungalow, Killearn, Glasgow.

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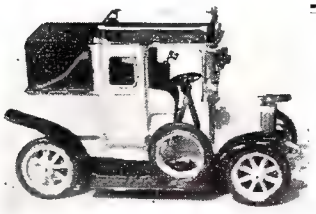

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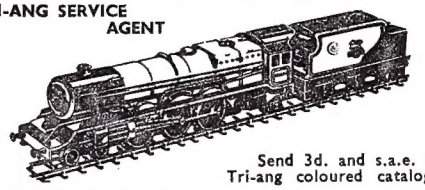

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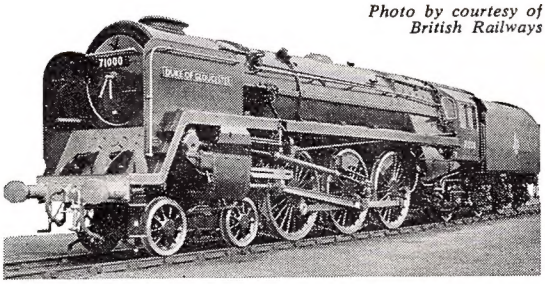

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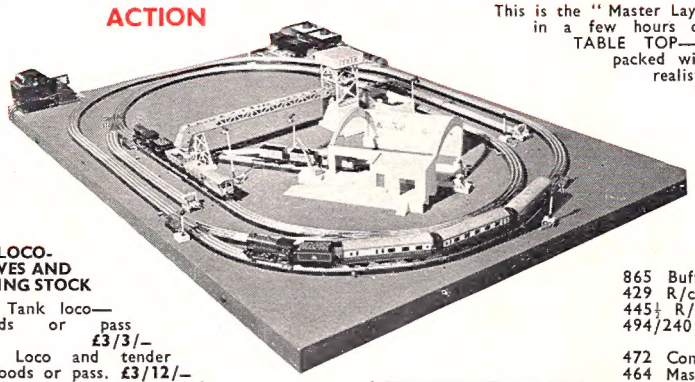

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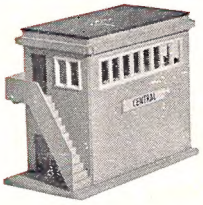

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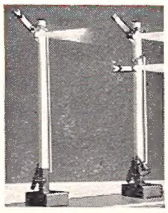

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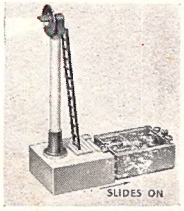

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